DOCUMENT RESUME

ED 149 025 CE 013 770

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TITLE 1976 Survey of Health Occupations Training Programs in Hospitals. Final Report.
INSTITUTION American Hospital Association, Chicago, Ill. Div. of Information Services.
SPONS AGENCY Health Resources Administration (DHEW/PHS), Bethesda, Md. Bureau of Health Manpower.
PUB DATE Sep 77
CONTRACT 231-75-0219
NOTE 223p.; Not available in paper copy due to marginal legibility of the original document

EDRS PRICE MF-$0.83 Plus Postage. HC Not Available from EDRS.
DESCRIPTORS Admission Criteria; *Educational Programs; Educational Research; Enrollment Projections; *Enrollment Trends; Graduate Surveys; Health Occupations; *Health Occupations Education; Health Personnel; Hospital Personnel; *Hospitals; Job Training; Labor Supply; National Surveys; Nursing; *Paramedical Occupations; Paraprofessional Personnel; Post Secondary Education; *Program Descriptions; Tables (Data); Trend Analysis

ABSTRACT

Objectives of a research project, which was a replication of a 1973 survey of preparatory education programs in hospitals, were to (1) update the publication "Health Occupations Training Programs Administered by Hospitals, October 1973, A Directory," compiled from the results of the 1973 survey, (2) collect detailed data on certain education variables on health occupation training programs, including types of programs, entry requirements, schedule, program duration, award conferred, graduates and projected graduates, and program capacity, and (3) provide a base of comparison with the findings from the 1973 survey to indicate a trend in terms of program size, number, type, and location of hospital-administered programs. Through two survey instruments data were collected on 4,826 programs reported by 1,806 hospitals in the United States and territorial possessions. Data indicated that (1) there is a wide variation in the types of training programs conducted by hospitals, (2) the programs cover a wide scope of skills, and (3) the programs range from those that are marginally formal to those that are highly structured. The data collection on program schedules, entry restrictions, and other educational variables indicated that the characteristics of the programs in the two studies are similar. Recommendations included developing a more accurate measurement of supply and demand for allied health manpower in order to determine the appropriate extent of training as a function of hospitals. Approximately half of this report is devoted to tabular data compiled during the study. Sample survey questionnaires are appended. (BL)

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231-75-0219

ED 109025

Final Report

1976 SURVEY OF HEALTH OCCUPATIONS TRAINING PROGRAMS IN HOSPITALS

by

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Department of Survey Research
American Hospital Association

September, 1977

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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SURVEY OF HEALTH OCCUPATIONS TRAINING PROGRAMS IN HOSPITALS

SECTION I
SURVEY METHODOLOGY

Introduction

The 1976 Survey of Health Occupations Training Programs in Hospitals was conducted by the American Hospital Association's Bureau of Information Services under contract number 231-75-0219 with the Bureau of Health Manpower, U.S. Department of Health, Education, and Welfare (HEW). The 1976 Survey is a replication of the 1973 Survey of Preparatory Education Programs in Hospitals also conducted by the AHA under contract with the Bureau of Health Manpower, then known as the Bureau of Health Resources Development.

The two surveys were developed as a response to the need for a comprehensive overview of all types of hospital-administered education programs from a national perspective. The results of these surveys complement similar surveys of junior and senior college allied health occupations training programs conducted simultaneously by the American Society of Allied Health Professions (ASAHP).

Survey Methodology

Data on health occupations training programs were collected from a survey universe of all nonmilitary hospitals, excluding prison and Department of Justice hospitals, in the United States and in U.S. Associated Areas (American Samoa, the Canal Zone, Guam, Puerto Rico, the Marshall Islands, and the Virgin Islands). The main purposes in conducting this project were (1) to update the publication, Health Occupations Training Programs Administered by Hospitals, October 1973, A Directory, compiled from the results of the 1973 project, (2) to collect detailed data on certain education variables including types of programs, entry requirements, schedule,

program duration, award conferred, graduates and projected graduates, and program capacity; and (3) to provide a base of comparison with the findings from the 1973 survey. The results of the 1976 survey combined with the 1973 data provide, for the first time, valuable trend data in terms of program size, number, type, and location of hospital-administered programs.

The 1976 study was carried out in two stages. In stage I a screener questionnaire was used to identify those hospitals with independently administered programs. In stage II a detailed questionnaire was used to collect extensive information on each program identified by the stage I questionnaire.

The two survey instruments used in this study, the screener questionnaire and the detailed questionnaire, are essentially the same as those used in the 1973 project. As a result of the final analysis of the 1973 project, however, certain areas of both instruments required adjustments. The changes to the screener questionnaire were implemented to allow for more information in determining the administrative control of potential programs. The changes to the detailed questionnaire were implemented to clarify the fact that marginally formal programs are within the scope of this project. The revisions to the survey instruments were formally begun in July 1975 and included input from the staffs of the AHA Divisions of Information Services, and Human Resource Management, Department of Health, Education, and Welfare staff and the research staff of the American Society of Allied Health Professions.

Stage I - Screener Questionnaire

In section A of the screener questionnaire (Appendix A) hospitals were asked to indicate if they had one or more nursing or allied health training programs that had the following four characteristics:

a) Is in operation or ready to be put into operation when needed

b) Is designed to train persons in the fields of nursing or allied health (Excludes training programs focusing on maintenance or central service staff)

c) Prepares persons for service in an occupation or at an occupational skill level new to them (Excludes programs that are primarily orientation, refresher courses, and continuing education)

d) Includes a minimum of 36 clock hours total of instruction/training, based on a written outline, which is given either in the classroom, or in a work-related location, or at both sites

In section B, the hospitals with one or more programs with the four characteristics specified above were asked to complete the following two items for each program:

1) Student/trainees are selected for entry into the program by (check as many as applicable) - Your hospital, Another hospital, Junior or senior college, or Another institution (for example, high school)

2) The principle administrative office of the program is located in (check one category only) - Your hospital, Another hospital, Junior or senior college, or Another institution (for example, high school)

In section B, the important definition of a student/trainee was stated as "... an individual who receives education or training in a program meeting all 4 program criteria. The individual may be an employee of a hospital or a nonemployee. The individual may be considered by the program administrators to be either a student, a trainee, or both." The designation student/trainee was used in order to include those hospital programs where the individual is first employed and then trained. In the 1973 survey respondents were confused as to whether the training of hospital employees should be included even if the four criteria were exhibited by a particular program.

The three questions from section B were included to assist the AHA staff in determining whether a program was actually independently administered by a hospital. The determination of a hospital-administered program is important in order to avoid duplication with the ASAHP project. As a result of AHA and HEW consultations, the 1976 survey identified hospital-administered programs as one in which the hospital had input into the selection of the student/trainee and in which the principal administrative office for the program was located in the hospital.

Selected programs were listed under the following major categories:

Clinical Laboratory Services
Dietetic and Nutritional Services
Emergency Services
Information and Communication
Medical Instrumentation
Medical Records
Mental Health
Nuclear Medicine
Nursing Services
Nurse Specialty and Other Related
Pharmacy Services
Physician Extender Personnel
Radiological Services
Social Services and Counseling
Other (not one of the above)

The screener questionnaire was mailed to a universe of 7300 hospitals in March 1976. In April and June 1976 a follow-up questionnaire was sent to all nonresponding hospitals. As of July 20, 1976, 88.8 percent of the questionnaires mailed were returned. The questionnaire identified 9205 potential programs in 2,389 hospitals (compared to 9,401 potential programs in 2,373 hospitals based on a mailing universe of 7,529 hospitals in 1973). The 9205 programs in 2,389 hospitals is the mailing universe for the detailed questionnaire. The 2,389 hospitals represent 36.8 percent of the total screener response and 32.7 percent of the screener universe.

The 1976 survey does not show a direct relationship of response rate and bed-size category, in a contrast to the 1973 survey which showed a direct relationship (text table 1). The category of under 25 beds had the highest response rate followed by the category of 400-499 beds. The category of 100-199 beds had the lowest response. There was almost a direct relationship of hospital size to the

Text Table 1: Response and Number of Hospitals Reporting Independently Administered Programs, by Bed-Size Category

Bed-Size Category	Universe	Response		Hospitals Reporting Independent Programs	Percent Programs in Universe
		No.	Percent		
Under 25	448	424	94.6	22	4.9
25-49	1,396	1,281	91.8	121	8.7
50-99	1,749	1,546	88.4	250	14.3
100-199	1,583	1,356	85.7	545	34.4
200-299	766	664	86.7	446	58.2
300-399	452	407	90.0	327	72.3
400-499	285	262	91.9	225	78.9
500 or More	621	546	87.9	453	72.9
All hospitals	7,300	6,486	88.8	2,389	32.7

number of hospital-administered programs reported. The only variation to this relationship is that the category of 400-499 beds had the highest rate of programs, followed by the category of 500 or more beds with the next highest rate. This relationship means that as hospital size increased, the percentage of hospitals reporting independently administered programs increased.

Stage II - Detailed Questionnaire

The screener questionnaire identified 9,205 programs in 2,389 hospitals. The mailing of the detailed questionnaires to the 2,389 hospitals began in May 1976. The detailed questionnaire (Appendix B) was designed to collect detailed information on individual training programs. A form was sent to each program at a hospital that had been identified by the screener. A label was affixed to each questionnaire that noted the name of the program as reported on the screener, the AHA code for the program, the AHA identification number for the hospital and descriptive information about each hospital, the AHA code for control, the predominant medical service provided, the predominant length of stay for its patients (short-term or long-term), and the bed-size category of the hospital.

Included with each set of questionnaires was a glossary of occupational titles (Appendix C). The purpose of the glossary was to standardize the classification of programs that were similar in technical outlook. Each title included in the glossary had a corresponding code that was specified on the label affixed to each questionnaire. In case there was no definition or occupational title that approximated that of a particular program, space was provided on the questionnaire for respondents to give a title and definition for their program.

The questionnaire requested information in five major areas. In section A, Program Determinants, respondents were asked to give the name by which the program was known

at their hospital, and the five characteristics specified on the screener questionnaire were restated. If, in reevaluating a particular program, the respondent did not find all of the five characteristics exibited, the respondent was to sign and return the questionnaire blank. Finally, respondents had the opportunity to change the occupational code (type of occupation) for a particular program if it was different from the occupational title and code specified on the label.

In section B, Background Information, respondents were asked to indicate whether the program offered basic occupational preparation or advanced education or training and whether any education and/or specific health training was required for entry into the program and if so, to specify the minimum educational level and/or specific health training required. They were also asked to indicate the number of times the program was offered each year, the number of times the program had been conducted during the last three years (1973, 1974, 1975) and the year the program began (either the actual year or the estimated years the program had been in operation). If training at another institution was a requirement for completion of the program, this type of training was to be specified, along with the length of time in months or weeks required to complete the program, the hours spent by a student/trainee in a normal week of instruction, and the total hours required to complete the program.

In section C, Award and Accreditation, respondents were asked to indicate whether an award was conferred to the student/trainee who successfully completed the program, the type of award conferred, and the type of institution that confers the award. They were also asked whether the program was accredited or in the process of applying for accreditation by a national agency or health professional

association, the name of the agency or health professional association, the year the program was last visited for accreditation, and the status of the accreditation (full, provisional, in process).

In section D, Student/Trainee Financing, respondents were asked to indicate whether there was a charge to the student/trainee for tuition, and whether the program was approved for attendance under the GI Bill by either the Veterans Administration or the states designated approving agency for veteran's affairs.

In section E, Student/Trainee Characteristics and Program Status, respondents were asked to indicate whether there was a class or training session (defined as one or more student/trainees meeting regularly to study the same subject or procedures either in a classroom setting or a work environment, or both) in progress as of April 15, 1976; the enrollment of each class broken down by gender and the racial/ethnic composition of each class by gender; the number of student/trainees who completed or expected to complete the program for each year between 1973-1978; whether entry into the program was restricted to hospital employees, and if entry into the program was not restricted to employees, the number of 1975 graduates who were offered jobs and who accepted employment within the hospitals; the maximum number of students who could have been trained in 1975; and the status of the program for the next two years regarding any changes in total enrollment.

In the last section, entitled Questionnaire Evaluation, respondents were provided space to comment about any difficulties in completing the questionnaire, any aspects of their program not covered by the questionnaire, and any additional comments or suggestions. Space was provided for respondents to indicate the name and location of the hospital and the name, title and telephone number of the individual to contact if there were any problems in interpreting the responses.

By January 1977, the closing date for the data collection aspect of stage II, 87 percent of the 9,205 questionnaires mailed had been returned to the AHA. The total universe figure has been adjusted to 9,252 programs. The net increase of 47 programs is the result of additional programs indicated on returned questionnaires as existing and possibly qualifying for inclusion. Questionnaires were sent for these potential programs and the response analyzed. In the final analysis, 4,826 programs conducted by 1,806 hospitals met all allied health occupations training program criteria. This report covers the 4,826 programs.

Types of Programs

The types of programs from which detailed information was gathered can be grouped under 24 major occupational categories and 114 occupational titles. A brief description of each category and the occupational titles under each category follow.

ADMINISTRATION, PLANNING, AND OFFICE personnel function at various levels to maintain and operate clinical offices and institutions and to plan for improved health care and delivery.

Hospital Assistant Administrator
Medical/Dental Secretary
Unit Clerk
Unit Manager

BIOMEDICAL ENGINEERING personnel combine basic engineering and biomedical sciences in order to design, assemble, and adapt medical devices, instruments, and processes to improve the quality and cost in the delivery of medical health care.

Biomedical Engineering Technician

CLINICAL LABORATORY SERVICES personnel work in a clinical laboratory setting, collecting, mounting, processing, classifying and analysing laboratory specimens.

Blood Bank Technology, Specialist in
Chemistry Technologist
Cytotechnologist
Electron Microscopy Technician
Hematology Technologist
Histologic Technician
Medical Laboratory Assistant
Medical Laboratory Technician

Medical Technologist
Microbiology Technologist

DENTAL SERVICES personnel render varieties of services to the dentist. They do general office work and laboratory work, and they assist the dentist at the chairside.

Dental Assistant
Maxillofacial Prosthodontia Technician

DIETETIC AND NUTRITIONAL SERVICES personnel translate nutritional needs into the selection, purchasing, preparation and service of appropriate foods along with the maintenance of equipment, sanitation, and cost control. They provide nutritional education to individuals and groups and serve as nutritional consultants to health facilities and communities.

Dietary Aide
Dietetic Assistant
Dietetic Technician
Dietitian
Nutritionist

EMERGENCY SERVICES personnel administer temporary medical help by responding to, evaluating, and assisting in emergency conditions.

Ambulance Attendant
Emergency Medical Technician

INFORMATION AND COMMUNICATION personnel apply a communications orientation to the development, presentation, organization, and recording of medical facts and material for the benefit of medical personnel and the general public.

Medical Photographer

MEDICAL INSTRUMENTATION AND MACHINE OPERATION personnel maintain and/or operate equipment and instruments that supplement and support body functions or that provide diagnostic or therapeutic services.

Cardiopulmonary Technician
Circulation Technologist
Dialysis Technician
Electrocardiographic Technician
Electroencephalographic/Cardiographic Technician
Electroencephalographic Technologist/Technician
Pulmonary Function Technician

MEDICAL RECORD personnel plan, organize and manage patient information systems and statistical reports for medical and administrative staff use and health care research.

Medical Record Administrator
Medical Record Technician
Medical Transcriptionist

MENTAL HEALTH PERSONNEL assist the health professionals in the prevention and treatment of mental disorders through recreational, occupational, and educational programs.

Clinical Psychologist
Human Services Technologist/Technician
Mental Health Administrator
Mental Health Associate/Technician/Assistant
Mental Health Technician
Mental Retardation Aide
Psychiatric Technician

NUCLEAR MEDICINE personnel prepare or use radioactive nuclides in laboratory procedures, scanning-imaging, and function studies for diagnostic, therapeutic, and research purposes.

Nuclear Medicine Technologist/Technician

NURSING AND RELATED SERVICES personnel assist the physician in bedside patient care and in the direction of patient care services within a clinical unit, and they provide specialty services as required by institutional and community needs.

Geriatric Care Worker
Licensed Practical Nurse
Nurse Aide/Orderly
Nurse Anesthetist
Nurse Midwife
Nurse Practitioner
Obstetrical Technician
Operating Room Technician
Registered Nurse

NURSE SPECIALTY AND OTHER RELATED personnel perform specialized nursing and nursing related services.

Cardiopulmonary Perfusionist
Clinician
Coronary Care
Coronary Care/Intensive Care
Dermatology
Diabetes
Emergency
Enterostomal Therapy
Family Nurse/Physical Assessment
Geriatric
Head Nurse Development
Hemodialysis/Renal Dialysis
High Rick Maternity
Intensive Care
Intravenous Technician
Monitor Technician
Neonatal Intensive
Neurological/Neurosurgical

Newborn/Pediatric
Obstetrics/Gynecology
Oncology
Pharmacology
Psychiatric
Rehabilitation
Respiratory Care
Surgical
Thoracic/Vascular
Trauma

VISION CARE personnel work with or carry out the prescriptions of the ophthalmologist and optometrist. Their duties include ophthalmic examinations, treatment, and correction of ophthalmic disorders by physical or mechanical measures.

Opthalmic Assistant/Technician
Orthoptist

PHARMACY SERVICES personnel assist the pharmacist with selected activities in pharmacy departments to provide pharmaceutical services to patients, nurses, and physicians.

Medication Pharmacy Technician
Pharmacist
Pharmacy Technician

PHYSICIAN EXTENDER personnel render direct and specific assistance to the physician specialist and general practitioner in clinical and research endeavors, taking medical histories, performing detailed physical examination, and conducting visual, auditory, developmental, and laboratory tests.

Physician Assistant-Primary Care
Physician Assistant-Specialty

RADIOLOGICAL SERVICES personnel use ionizing radiation for diagnostic, therapeutic, and research purposes.

Radiation Therapy Technologist/Technician
Radiologic Technologist/Technician
Ultrasound Technical Specialist

REHABILITATION-OCCUPATIONAL personnel use work-related skills in treating or training patients who are physically or mentally ill, in preventing disability, in evaluating behavior, and in restoring disabled persons to health and social or economic independence.

Occupational Therapist
Occupational Therapy Assistant

REHABILITATION-PHYSICAL personnel use physical agents, assistive devices and therapeutic exercise for the prevention of disease and disability, and toward restoration of function to disabled persons.

Orthopedic Technician
Orthotic/Prosthetic Technician
Orthotist/Prosthetist
Physical Therapist
Physical Therapy Assistant

REHABILITATION-NOT ELSEWHERE CLASSIFIED personnel apply the principles of rehabilitation to diversified areas of therapeutic technique, such as education, fine arts, and recreation.

Art Therapist
Music Therapist
Recretional Therapist

RESPIRATORY THERAPY SERVICES personnel treat, manage, control, and perform diagnostic evaluations, under medical direction, in the care of patients with deficiencies and abnormalities in the cardiopulmonary system.

Respiratory Therapist
Respiratory Therapy Technician

SOCIAL SERVICES AND COUNSELING personnel use individual or group counseling techniques or provide services offered by social agencies to assist individuals in personal and/or social adjustment.

Alcohol/Drug Abuse Specialist
Child Care Worker
Clinical Pastoral Counselor
Family Counselor
Homemaker/Home Health Aide
Medical/Psychiatric Social Worker
Psychiatric Social Worker
Rehabilitation Counselor
Social Work Associate

SPEECH AND HEARING SERVICES personnel evaluate, record, habilitate, and research speech and hearing disorders in children and adults.

Audiologist
Speech Pathologist

VETERINARY SERVICES personnel work with the care, use, production, and husbandry of animals in a medical setting.

Laboratory Animal Worker

SECTION II

DATA ANALYSIS

As noted in Section I, the 1976 Survey of Health Occupations Training Programs in Hospitals collected detailed information on 4,826 programs reported by 1,806 hospitals. The number of programs included in this study represents a 12.9 percent increase over the 4,273 programs that were included in the results from the 1973 survey. The 4,826 programs were classified under 24 major categories and 114 occupational titles. (For a list of the differences in occupation titles used in the two studies and the number of total programs for each title, see Appendix A.)

One of the purposes for conducting this study was to collect information to be used in updating the publication Health Occupations Training Programs Administered by Hospitals, October 1973: A Directory. The updated directory will include information on 4,552 programs conducted by 1,753 hospitals. Of the total 4,826 programs, 274 will not be included in the directory because they are being either merged with another program or phased out entirely. Fifty-three hospitals that conducted only merged or phased out programs will also be excluded from this directory. The 1976 directory will contain information on 12.7 percent more programs than the 4,041 included in the 1973 directory. The updated publication should be available by the end of October, 1977.

For the purposes of analysis, tabular data have been broken down into two parts. Part 1 will analyze the finding regarding all 114 occupational titles and will also include a comparison of the results of this study and the 1973 survey. Part 2 will analyze the characteristics of each of the 14 most frequently reported allied health occupations training programs.

Part 1

General Overview

The results of this study further substantiated the findings from the 1973 survey. The data indicated that (1) there is a wide variation in the types of training programs conducted by hospitals, (2) the programs cover a wide scope of skills, and (3) the programs range from those that are marginally formal to those that are highly structured (tables A-1, A-2, A-3, A-4, section V). The data collected on program schedules, entry restrictions and other educational variables indicated that the characteristics of the programs in the two studies are similar (text table 2).

The data collected on hospital-administered programs reveal that many programs are conducted only when needed, that is, when staff vacancies exist. In addition the potential employees needed to fill these vacancies are individuals already employed by the hospitals. Forty-two percent of the programs are conducted only when needed (46 percent in 1973). Thirty-nine percent are conducted once a year (37 percent in 1973). Sixteen percent are conducted more than once a year (16 percent in 1973). Two percent of the programs were offered on a schedule not specified above. Sixty percent of the programs had a class in progress as of April 15, 1976.

The scheduling of the program is associated with whether or not admission is restricted to hospital employees. Entry was restricted to hospital employees in 35 percent of the programs (32 percent in 1973). The data also indicated, in accordance with the high percentage of programs restricted to hospital employees and scheduled only when needed, that tuition was charged to student/trainees in only 28 percent of the programs (24 percent in 1973). Thirty percent of the programs were approved for attendance under the GI Bill.

Text Table 2 - Selected Program Characteristics, 1973 and 1976

Program Characteristics	1976		1973	
	Number	Percent	Number	Percent
Frequency of Conducting Programs				
Programs reporting	4,826	100.0	4,272	100.0
No regular schedule	2,039	42.3	1,976	46.3
Once a year	1,893	39.2	1,561	36.5
More than once a year	787	16.3	702	16.4
Other schedule	107	2.2	*	*
Admission Restricted				
Programs reporting	4,825	100.0	4,256	100.0
Admission restricted to employees	1,680	34.8	1,346	31.6
Admission not restricted	3,145	65.2	2,910	68.4
Tuition Charge				
Programs reporting	4,824	100.0	4,273	100.0
Tuition	1,352	28.0	1,026	24.0
No tuition	3,472	72.0	3,247	76.0
Program Prerequisites				
Programs reporting	4,826	100.0	4,214	100.0
Program prerequisites required	4,340	89.9	3,877	92.0
No program prerequisites required	486	10.1	337	8.0
Accreditation Status				
Programs reporting	4,826	100.0	4,241	100.0
Program is accredited	1,922	39.8	1,681	39.6
Program is not accredited	2,904	60.2	2,560	60.4
Award				
Programs reporting	4,825	100.0	4,260	100.0
Award conferred	3,592	74.4	2,918	68.5
Award not conferred	1,233	25.6	1,342	31.5

*Not comparable - 1973 category was labeled "Less than once a year"

Ninety percent of the programs had a minimum educational and/or specific health training requirement for entry (92 percent in 1973). A total of 5,307 minimum education levels and specific health training requirements was reported by the 4,340 programs. Only one specific requirement was reported by 3,572 programs. There were multiple requirements for 768 programs. High school graduation was the most frequently reported requirement, followed by completion of registered nurse training. Only 29 percent of the total requirements pertained to specific health training; the majority of the programs, 78 percent, are concerned with basic occupational preparation.

Accreditation is the process by which an agency or organization evaluates and recognizes an institution's program of study as meeting certain predetermined qualifications or standards. Forty percent of the programs are accredited or in the process of applying for accreditation by a national agency or by a national health professional association. This is the same percentage as those programs in the 1973 survey that were accredited/approved. No nationally recognized accrediting agencies exist for 51 percent of the 4,826 hospital-administered programs in 1976.

Awards were conferred by 74 percent of the programs (69 percent in 1973). The following were considered as awards: Certificate of completion, Diploma, Associate degree, Bachelor's degree, and Master's degree. Multiple awards were conferred in some instances. Certification, registration by a professional association, college credits and continuing education units were not considered as awards.

In 77 percent of the programs, no change was expected affecting the enrollment status. Fifteen percent of the programs are being expanded, and only 3 percent

of the programs will be reduced in size. Approximately 6 percent of the programs will be either merged with another program or phased out completely within the next two years.

Programs by Region and Bed-Size Category

Tables A-5 and A-6, section V, list occupational titles of programs by region and bed-size category. The 14 selected occupations to be discussed in Part 2 account for 77 percent of the total programs reported in 1976 (text table 3). The remaining 100 occupational titles comprise 23 percent of the total programs. Each of the remaining 100 occupational titles represents less than 2 percent of the total programs reported.

Text table 3 shows that each of the 14 selected occupations from this study are compared with their corresponding totals from the 1973 project. The total program count for the selected occupations is 3,733 compared to 3,217 for those occupations in the previous study. The difference in number of programs is 516. Because the 1976 survey collected information on 553 more programs than the 1973 survey, 93 percent of the difference is attributed to changes in the two studies for these selected occupations.

Seven of the selected occupational titles show an increase over the 1973 results in terms of both number and percent of total programs. Nurse Specialty-Coronary Care/Intensive Care and Clinical Pastoral Counselor programs have increased more than 300 percent. The percentage of total programs for these occupational titles has risen from 2.0 to 8.5 percent and 0.7 to 2.9 percent, respectively. Dietitian and Emergency Medical Technician programs have risen more than 100 percent in terms of the number of programs reported. Seven of the occupational titles have decreased since 1973 both in number of programs reported and percentage of total

Text Table 3 - Percent Change of Programs by Occupational Title, 1973 and 1976

	Number of Programs			Percent of Total	
	1973	1976	Percent change	1973	1976
All Occupational Titles	4,273	4,826	12.9	100.0	100.0
14 Selected Occupational Titles					
Nurse Aide/Orderly	883	726	-17.8	20.7	15.0
Radiologic Technologist/Technician	534	461	-13.7	12.5	9.6
Unit Clerk	442	423	- 4.3	10.3	8.8
NS-Coronary Care/Intensive Care*	86	412	379.0	2.0	8.5
Medical Technologist	213	376	76.5	5.0	7.8
Registered Nurse	320	298	- 6.9	7.5	6.2
Psychiatric Technician	133	165	24.1	3.1	3.4
Dietitian	57	146	156.1	1.3	3.0
Clinical Pastoral Counselor	29	142	389.7	0.7	2.9
Operating Room Technician	155	139	-10.3	3.6	2.9
Nurse Anesthetist	131	116	-11.5	3.1	2.4
Licensed Practical Nurse	114	112	- 1.8	2.7	2.3
Emergency Medical Technician	48	110	129.2	1.1	2.3
Respiratory Therapy Technician	72	107	48.6	1.7	2.2

*Nurse Specialty-Coronary Care/Intensive Care

programs. The rate of change for the seven occupational titles that have decreased is much lower than the rate of change for the seven titles which have increased. The number of Nurse Aide/Orderly programs has decreased by 18 percent over the combined Nurse Aide, Orderly and Nurse Aide/Orderly titles used as separate classifications in the 1973 study. The percentage of total programs for this occupational title, highest in both studies, has decreased from 21 percent in 1973 to 15 percent in 1976. Radiologic Technologist/Technician, Nurse Anesthetist, and Operating Room Technicians programs have decreased in total programs reported by 14, 12, and 10 percent respectively. Radiologic Technologist/Technician programs have decreased from 13 to 10 percent of the total programs.

A listing of the 24 major occupational categories ranked by number of programs and percentage of total programs is shown in text table 4. Seventy-five percent of all programs were reported in five major categories: Nursing and Related Services; Clinical Laboratory Services; Nurse Specialty and Other Related; Radiologic Services; Administration, Planning and Office. Thirteen of the major categories (through Pharmacy Services) contain 98 percent of all programs reported. The remaining 11 categories account for less than 2 percent of the total programs and each of these categories account for less than one percent of all programs reported.

Twenty-four major categories are used in this study compared to 23 used in the 1973 survey (text table 5). Respiratory Therapy was considered as a major category for this study, whereas in 1973 it was formerly a component of Medical Instrumentation and Machine Operation. An occupational program was reported for the first time in the area of Veterinary Services. This study does not include any programs categorized as Health Professionals Not Elsewhere Classified, as in the 1973 survey.

Text Table 4 - Programs by Major Occupational Categories

	Programs	
	Number	Percent
All Major Occupational Categories	4,826	100.0
Nursing and Related Services	1,430	29.6
Clinical Laboratory Services	617	12.8
Nurse Specialty and Other Related	606	12.6
Radiological Services	494	10.2
Administration, Planning and Office	449	9.3
Mental Health	236	4.9
Dietetic and Nutritional Services	195	4.0
Social Services and Counseling	174	3.6
Medical Instrumentation and Machine Operation	163	3.4
Respiratory Therapy Services	119	2.5
Emergency Services	113	2.3
Nuclear Medicine	78	1.6
Pharmacy Services	77	1.6
Medical Record	34	0.7
Rehabilitation - Physical	11	0.2
Physician Extender	7	0.1
Rehabilitation - Other	6	0.1
Vision Care	5	0.1
Information and Communication	3	0.1
Rehabilitation - Occupational	3	0.1
Dental Services	2	0.0
Speech and Hearing Services	2	0.0
Biomedical Engineering	1	0.0
Veterinary Services	1	0.0

Text Table 5 - Major Categories--Number of Programs and Percent of Total Programs, 1973 and 1976

	Programs			Percent of Total	
	1973	1976	% Change	1973	1976
All Major Occupational Categories	4,273	4,826	12.9	100.0	100.0
Nursing and Related Services	1,633	1,430	-12.4	38.2	29.6
Clinical Laboratory Services	506	617	21.9	11.8	12.8
Nurse Specialty and Other Related	184	606	229.3	4.3	12.6
Radiological Services	563	494	-12.3	13.2	10.2
Administration, Planning and Office	487	449	- 7.8	11.4	9.3
Mental Health	190	236	24.2	4.4	4.9
Dietetic and Nutritional Services	129	195	51.2	3.0	4.0
Social Services and Counseling	50	174	248.0	1.2	3.6
Medical Instrumentation and Machine Operation	262	163	-37.8	6.1	3.4
Respiratory Therapy Services		119			2.5
Emergency Services	55	113	105.5	1.3	2.3
Nuclear Medicine	62	78	25.8	1.4	1.6
Pharmacy Services	45	77	71.1	1.0	1.6
Medical Record	41	34	-17.1	1.0	0.7
Rehabilitation - Physical	29	11	-62.1	0.7	0.2
Physician Extender	6	7	16.7	0.1	0.1
Rehabilitation - Other	7	6	-14.3	0.1	0.1
Vision Care	6	5	-16.7	0.1	0.1
Information and Communication	5	3	-40.0	0.1	0.1
Rehabilitation - Occupational	3	3	0.0	0.1	0.1
Dental Services	2	2	0.0	0.0	0.0
Speech and Hearing Services	5	2	-60.0	0.1	0.0
Biomedical Engineering	1	1	0.0	0.0	0.0
Veterinary Services		1			0.0
Health Professionals not Elsewhere Classified	2			0.0	

Text table 5 shows that 14 of the 24 major categories have increased their number of programs and percentage of total programs compared to the 1973 findings. In concentrating on the 13 most frequently reported categories, which contain 98 percent of the total programs, 8 categories have increased since 1973. The magnitude of the change for each category is closely related to changes for specific occupations noted previously. Significantly, Social Services and Counseling and Nurse Specialty and Other Related have increased more than 200 percent in terms of the number of programs reported. The percentage of total programs in these categories has increased from 1 to 4 percent and from 4 to 12 percent respectively. The titles Clinical Pastoral Counselor and Nurse Specialty-Coronary Care/Intensive Care are included in these categories. Emergency Services, which includes Emergency Medical Technician programs, has increased by 105 percent as compared to 1973. Although Dietitian programs have increased more than 100 percent since 1973, the major category Dietetic and Nutritional Services has increased by only 51 percent more programs over 1973.

The rate of negative change for those categories containing fewer programs in 1976 than in 1973 is much less than the rate of increase for those categories which contain more programs. This is the same situation that existed for specific occupational titles. Nursing and Related Services and Radiological Services have decreased at approximately 12 percent in terms of the total programs reported between the two studies. There have been 38 percent fewer programs under the category Medical Instrumentation and Machine Operation for this study. This change was attributed to excluding Respiratory Therapy Services from this category. Respiratory Therapy Services, considered as a distinct category in this study, accounted for 3 percent of the total programs reported.

In comparing the two survey periods the percentage of Nursing and Related Services and Nurse Specialty and Other Related comprised 42.5 percent of the

total programs in 1973 and 42.2 percent of the total program in 1976. The 1976 data indicates an internal shift within the nursing area to the nurse specialties. Of the combined Nursing and Related Services and Nurse Specialty and Other Related programs in 1973, 4.3 percent were in the area of the nurse specialties. In 1976 the nurse specialties comprised 12.6 percent of the total programs in the nursing area.

Approximately 70 percent of the programs were conducted in four regions (text table 6), East North Central, Middle Atlantic, South Atlantic, and West North Central. The ratio of programs to hospitals was high in these regions and for the New England region as well. The U.S. Associated Areas, West South Central, and Mountain regions had the lowest ratio of programs to hospitals. Approximately 11 percent of the total programs were conducted in these regions. The ratio varied from 0.162 in the U.S. Associated Areas to 1.128 in the East North Central.

The distribution of programs by region in comparison to the 1973 findings show that in 7 of the 10 regions, the numbers of programs reported have increased (text table 7). The Pacific, West North Central, and Mountain regions have shown increases of programs reported in excess of 25 percent. The percentage of total programs reported in the Pacific region has increased from 6 percent in 1973 to 7 percent in 1976. The percentage of total programs in the West North Central and the Mountain regions has increased from 9 to 11 percent and from 3 to 4 percent respectively. The number of programs reported has decreased for the U.S. Associated Areas, West South Central, and Middle Atlantic regions. Although the total programs reported have decreased in the Middle Atlantic region by only 1 percent, the percentage of total programs contained in this region has decreased from 22 percent in 1973 to 19 percent in 1976. The number of programs reported

Text Table 6 - Ratio of Programs to Universe Hospitals by Region

	Ratio Programs to Hospitals	Programs		Universe Hospitals	
		Number	Percent	Number	Percent
All Regions	0.661	4,826	100.0	7,300	100.0
East North Central	1.128	1,259	26.1	1,116	15.3
Middle Atlantic	1.066	932	19.3	874	12.0
New England	0.851	354	7.3	416	5.7
South Atlantic	0.639	651	13.5	1,019	14.0
West North Central	0.560	514	10.7	918	12.6
East South Central	0.419	239	5.0	571	7.8
Pacific	0.405	357	7.4	882	12.1
Mountain	0.398	179	3.7	450	6.2
West South Central	0.336	329	6.8	980	13.4
U.S. Associated Areas	0.162	12	0.2	74	1.0

Text Table 7 - Number of Programs and Percent of Total Programs by Region, 1973 and 1976

	Number of Programs			Percent of Total	
	1973	1976	Percent Change	1973	1976
All Regions	4,273	4,826	12.9	100.0	100.0
East North Central	1,086	1,259	15.9	25.4	26.1
Middle Atlantic	941	932	- 1.0	22.0	19.3
New England	295	354	20.0	6.9	7.3
South Atlantic	581	651	12.0	13.6	13.5
West North Central	389	514	32.1	9.1	10.7
East South Central	218	239	9.6	5.1	5.0
Pacific	259	357	37.8	6.1	7.4
Mountain	142	179	26.1	3.3	3.7
West South Central	347	329	- 5.2	8.1	6.8
U.S. Associated Areas	15	12	-20.0	0.4	0.2

in the West South Central region has decreased by 5 percent, with the percentage of total programs decreasing from 8 to 7 percent. The programs reported in the U.S. Associated Areas and the percentage of total programs have decreased. The total percentage of programs in this region, however, is less than 1 percent in both studies. Two regions, the South Atlantic and East South Central, have shown slight increases in the number of programs reported. The percentage of total programs for these regions, however, has decreased slightly.

The distribution of the 14 selected occupational titles by region approximated the distribution of total programs by region (text table 8). The following variations from this pattern have been noted. There were no Radiologic Technologist/ Technician, Medical Technologist, Registered Nurse, Dietitian, Clinical Pastoral Counselor, Operating Room Rechnician, or Licensed Practical Nurse programs conducted in the U.S. Associated Areas. There were no Nurse Anesthetist programs conducted in the Mountain region. Thirty-two percent of the Nurse Anesthetist programs were reported in the Middle Atlantic region. The Middle Atlantic and the East North Central regions contained 56 percent of all Registered Nurse programs. These two regions, however, contained only 32 percent of the Licensed Practical Nurse programs. In contrast, only one percent of the Registered Nurse programs were conducted in the West South Central region. This region contained, however, 32 percent of the Licensed Practical Nurse Programs. The East North Central region contains 35 percent of all Unit Clerk programs. The Pacific and East North Central regions reported 47 percent of the Medical Technologist programs. Although 19 percent of the total programs were reported in the Middle Atlantic, only 6 percent of the Clinical Pastoral Counselor programs were conducted in this region. In contrast, the West North Central region contained only 11 percent of the total programs but 25 percent of all Clinical Pastoral Counselor programs.

Text Table 8 - 14 Selected Occupational Titles, by Region

Occupational Title	Total Programs		New England	Middle Atlantic	South Atlantic	East North Central	East South Central	West North Central	West South Central	Mountain	Pacific	U.S. Associated Areas
	No.	%	%	%	%	%	%	%	%	%	%	%
All Occupations	4,826	100.0	7.3	19.3	13.5	26.1	5.0	10.7	6.8	3.7	7.4	0.2
Nurse Aide/Orderly	726	100.0	6.7	19.0	12.3	26.4	6.9	11.2	8.3	4.3	4.8	0.1
Radiologic Technologist/ Technician	461	100.0	5.2	21.9	16.9	24.9	4.1	13.9	5.0	3.0	5.0	0.0
Unit Clerk	423	100.0	5.9	16.1	13.0	34.5	5.9	8.5	7.1	4.7	3.8	0.5
NS-Coronary Care/Intensive Care*	412	100.0	7.8	22.3	12.9	19.2	6.8	10.7	4.1	4.4	10.9	1.0
Medical Technologist	376	100.0	7.7	11.4	9.6	26.3	5.3	7.7	7.2	4.3	20.5	0.0
Registered Nurse	298	100.0	12.8	31.9	10.1	24.5	4.4	12.8	1.3	0.7	1.7	0.0
Psychiatric Technician	165	100.0	7.9	21.2	12.7	27.9	4.2	15.8	3.6	3.0	3.0	0.6
Dietitian	146	100.0	8.9	13.0	12.3	23.3	4.8	13.0	7.5	4.8	12.3	0.0
Clinical Pastoral Counselor	142	100.0	7.7	6.3	14.8	23.9	5.6	25.4	4.9	2.1	9.2	0.0
Operating Room Technician	139	100.0	6.5	19.4	21.6	28.1	6.5	7.2	7.2	2.9	0.7	0.0
Nurse Anesthetist	116	100.0	9.5	31.9	17.2	16.4	5.2	11.2	5.2	0.0	2.6	0.9
Licensed Practical Nurse	112	100.0	9.8	20.5	17.0	11.6	0.9	2.7	32.1	1.8	3.6	0.0
Emergency Medical Technician	110	100.0	8.2	19.1	2.7	38.2	2.7	13.6	5.5	6.4	2.7	0.9
Respiratory Therapy Technician	107	100.0	6.5	16.8	15.9	29.9	5.6	10.3	9.3	3.7	0.9	0.9

*Nurse Specialty-Coronary Care/Intensive Care

The ratio of programs to hospitals increased as bed-size category increased. The ratio varied from 0.042 in the smallest bed-size category to 2.549 in the largest bed-size category (text table 9). The 500 or more bed-size category also had the highest percentage of total programs (approximately one-third of all programs reported), followed by hospitals with 200-299 beds. The fewest programs were reported in the smallest bed-size group (under 50 beds) followed by the 50-99 size category. Although those hospitals with fewer than 100 beds comprised 49 percent of the total universe, their percentage of total programs is only 6 percent.

In comparison with the results of the 1973 survey, all bed-size groups have shown increases in the number of programs reported (text table 10). The largest percentage increase was in the category of under 50 beds. There were 51 percent more programs reported in this category than in 1973. Twenty-nine percent more programs were reported in hospitals with 500-or-more beds. These size categories have increased in percentage of total programs from 1 to 2 percent and from 29 to 33 percent respectively. The 300-399 category has shown the smallest increase of programs reported at 2 percent, followed by a 3 percent increase in the 200-299 bed category. The percentage of total programs, however, has decreased for these categories. The category of 200-299 beds has decreased from 20 to 18 percent, followed by the category of 300-399 beds, which decreased from 18 to 17 percent of the total.

In reviewing the 14 selected occupations by bed-size category, 70 percent of all programs were conducted in hospitals with at least 200 beds (text table 11). The exception to this pattern is Nurse Aide/Orderly, Nurse Specialty-Coronary Care/ Intensive Care, Emergency Medical Technician, and Licensed Practical Nurse programs.

Text Table 9 - Ratio of Programs to Universe Hospitals, by Bed Size Category of Hospitals

Bed Size Category	Ratio Programs to Hospitals	Programs		Universe Hospitals	
		Number	Percent	Number	Percent
All Hospitals	0.661	4,826	100.0	7,300	100.0
Under 50 beds	0.042	77	1.6	1,844	25.3
50- 99	0.114	200	4.1	1,749	24.0
100-199	0.406	643	13.3	1,583	21.7
200-299	1.136	870	18.0	766	10.5
300-399	1.757	794	16.5	452	6.2
400-499	2.312	659	13.7	285	3.9
500 or more	2.549	1,563	32.8	621	8.5

Text Table 10 - Number of Programs and Percent of Total Programs by Bed Size Category, 1973 and 1976

Bed-size category	Number of Programs			Percent of Total	
	1973	1976	Percent change	1973	1976
All Hospitals	4,273	4,826	12.9	100.0	100.0
Under 50 beds	51	77	51.0	1.2	1.6
50- 99	185	200	8.1	4.3	4.1
100-199	606	643	6.1	14.2	13.3
200-299	841	870	3.4	19.7	18.0
300-399	779	794	1.9	18.2	16.5
400-499	579	659	13.8	13.6	13.7
500 or more	1,232	1,583	28.5	28.8	32.8

Text Table 11 - 14 Selected Occupational Titles, by Bed-size Category

Occupational Title	Total Programs		Under 50	50-99	100-199	200-299	300-399	400-499	500 or more
	No.	%	%	%	%	%	%	%	%
All Occupations	4,826	100.0	1.6	4.1	13.3	18.0	16.5	13.7	32.8
Nurse Aide/Orderly	726	100.0	3.9	8.4	19.1	19.0	15.0	9.6	24.9
Radiologic Technologist/Technician	461	100.0	0.0	2.4	14.1	21.3	21.0	14.8	26.5
Unit Clerk	423	100.0	0.5	4.5	18.0	20.6	15.1	14.2	27.2
NS - Coronary Care/Intensive Care*	412	100.0	1.5	7.5	22.3	21.6	15.0	10.7	21.4
Medical Technologist	376	100.0	0.0	1.6	9.0	18.6	22.3	20.5	27.9
Registered Nurse	298	100.0	0.0	0.7	8.1	22.1	21.1	16.4	31.5
Psychiatric Technician	165	100.0	3.6	2.4	7.3	9.1	4.8	7.3	65.5
Dietitian	146	100.0	0.0	0.0	7.5	16.4	17.1	15.1	43.8
Clinical Pastoral Counselor	142	100.0	0.7	0.7	4.2	13.4	13.4	19.7	47.9
Operating Room Technician	139	100.0	0.7	2.2	7.9	18.0	23.7	19.4	28.1
Nurse Anesthetist	116	100.0	0.0	0.0	7.8	14.7	21.6	12.9	43.1
Licensed Practical Nurse	112	100.0	10.7	12.5	18.8	14.3	13.4	4.5	25.9
Emergency Medical Technician	110	100.0	3.6	10.0	21.8	21.8	11.8	13.6	17.3
Respiratory Therapy Technician	107	100.0	1.9	5.6	16.8	17.8	19.6	11.2	27.1

*Nurse Specialty - Coronary Care/Intensive Care

The 500 or more bed-size category accounted for 66 percent of the Psychiatric Technician programs, because of the majority of psychiatric hospitals in this category. Over 40 percent of the Clinical Pastoral Counselor, Dietitian, and Nurse Anesthetist programs and approximately one-third of the Registered Nurse programs were conducted in the largest hospitals. The location of the majority of the selected occupational titles in the largest hospitals probably is because (1) these institutions, because of their size, have the greatest demand for more highly skilled personnel and (2) the number and types of clinical experience necessary in allied health occupational training is greater in the large hospitals.

Graduates

Graduates from 1973 to 1975 and projected graduates for 1976 to 1978 are listed by occupational titles, by region, and by bed size in tables, A-7 to A-10, section V. Actual graduates were reported by respondents for 1973, 1974 and 1975. Projected graduates were reported by respondents as the estimated number of students/trainees expected to graduate or otherwise successfully expected to complete the program in 1976, 1977, and 1978. Graduates projected for 1976, 1977, and 1978 in the 14 selected occupational titles comprised 88 percent of the total health occupations graduates for those years (text table 12). However, two occupational titles, Dietary Aide and Nurse Specialty-Pharmacology, reported more graduates than did 4 of the most frequently reported programs, Nurse Anesthetist, Respiratory Therapy Technician, Dietitian, and Operating Room Technician in 1976. Nurse Aide/Orderly accounted for 21 percent of the 1976 projected graduates. Registered Nurse and Nurse Specialty-Coronary Care/Intensive Care accounted for 17 and 12 percent of the graduates, respectively. Ten occupational programs accounted for 85 percent of the 1976 projected graduates. Each of the other 105 occupations accounted for less than one percent of the graduates.

Text Table 12 - Projected Graduates, 1976, 1977, and 1978

Occupational Totals	Projected Graduates					
	1976		1977		1978	
	Number	Percent	Number	Percent	Number	Percent
Total: All Occupational Titles	81,252	100.0	79,993	100.0	78,263	100.0
Nurse Aide/Orderly	17,345	21.4	16,154	20.2	15,585	19.9
Registered Nurse	14,013	17.3	14,089	17.6	14,914	19.1
NS-Coronary Care/Intensive Care*	9,563	11.8	9,715	12.1	9,576	12.2
Emergency Medical Technician	6,457	8.0	6,126	7.7	5,546	7.1
Unit Clerk	5,363	6.6	4,828	6.0	4,828	6.2
Psychiatric Technician	5,094	6.3	5,264	6.6	4,150	5.3
Licensed Practical Nurse	3,304	4.1	3,417	4.3	3,310	4.2
Radiologic Technologist/Technician	3,060	3.8	3,318	4.2	3,686	4.7
Medical Technologist	2,976	3.7	3,041	3.8	3,070	3.9
Clinical Pastoral Counselor	1,661	2.0	1,825	2.3	1,962	2.5
Nurse Anesthetist	641	0.8	625	0.8	676	0.9
Respiratory Therapy Technician	634	0.8	750	0.9	754	1.0
Dietitian	584	0.7	585	0.7	585	0.8
Operating Room Technician	551	0.7	553	0.7	529	0.7
All Other Occupations**	10,006	12.3	9,703	12.1	9,092	11.6

*Nurse Specialty-Coronary Care/Intensive Care

**1976 projected graduates for All Other Occuaptions includes 764 graduates for Dietary Aide and 679 graduates for Nurse Specialty-Pharmacology.

Note: Projected graduates were reported by respondents as the estimated number of students/trainees expected to graduate or otherwise successfully expected to complete the program in 1976, 1977, and 1978.

In text table 13, the mean number of graduates for the years 1970 through 1978 are compared. The mean actual graduates reported in the 1973 survey for the years 1970 through 1972 are used in this comparison. The use of the mean graduates per reporting hospital as the basis of comparison has been selected for the following reason: the number of programs reporting actual or projected graduates decreased from 1976 and from 1973 in the previous study. Except for the decreases in the mean number of graduates from 1970-1971 of 4 percent and from 1974-1975 of 5 percent, increases were reported in all other periods.

The periods 1971-1972 and 1975-1976 showed the smallest percentage increases (less than 1 percent) in mean graduates. Significantly, these increases were noted in the periods following the only decreases in mean graduates. Between 1976-1977 and 1977-1978, the mean graduates increased by approximately 4 percent during each period.

The mean graduates expected from 1976 through 1978 showed increases in 8 of the 10 regions for the entire period (text table 14). The expected mean graduates in both the Middle Atlantic and Associated Regions decreased slightly between 1976 and 1977. The mean graduates for both regions increased between 1977 and 1978.

The mean graduates increased between 1976 and 1978 for all bed-size categories except for the category of under 50 beds. For this category the decrease was continual from 1976 through 1978. The range varied from 18.18 in 1976 to a low of 14.81 in 1978.

The projected mean graduates increased continually from 1976 through 1978 for all selected occupations except Psychiatric Technician and Unit Clerk (text table 15). The mean projected graduates for Unit Clerk were expected to decrease in 1977

Text Table 13 - Graduates and Projected Graduates, 1970 to 1978

Year	Programs Reporting	Graduates		
		Number	Mean	Percent Increase
1970	2,971	57,142	19.23	
1971	3,269	60,372	18.47	-4.0
1972	3,647	67,976	18.64	0.9
1973	3,508	66,756	19.03	2.1
1974	3,863	76,755	19.87	4.4
1975	4,193	79,234	18.90	-4.9
1976	4,269	81,252	19.03	0.7
1977	4,045	79,993	19.78	3.9
1978	3,807	78,263	20.56	3.9

Note:

Projected graduates were reported by respondents as the number of students/trainees expected to graduate or otherwise successfully expected to complete the program in 1976, 1977, and 1978.

Text Table 14 - Mean Projected Graduates by Region and by Bed-Size Category, 1976 to 1978

	Mean Projected Graduates			Percent Change	
	1976	1977	1978	1976-1977	1977-1978
Region					
New England	18.82	19.91	20.70	5.8	4.0
Middle Atlantic	20.60	20.52	21.38	- 0.4	4.2
South Atlantic	16.82	17.72	18.83	5.4	6.3
East North Central	20.58	21.40	22.07	4.0	3.1
East South Central	16.96	18.48	19.56	9.0	5.8
West North Central	21.31	21.81	22.23	2.3	1.9
West South Central	17.31	19.08	19.87	10.2	4.1
Mountain	15.09	15.12	15.81	0.2	4.6
Pacific	15.56	16.73	17.51	7.5	4.7
U.S. Associated Areas	15.71	12.83	14.60	-18.3	13.8
Bed Size					
Under 50 beds	18.18	17.03	14.81	- 6.3	-13.0
50- 99	11.71	12.58	12.72	7.4	1.1
100-199	13.27	14.00	15.01	5.5	7.2
200-299	15.56	16.85	16.74	8.3	- 0.7
300-399	18.07	18.59	20.17	2.9	8.5
400-499	19.26	19.43	20.19	0.9	3.9
500 or more	24.41	25.25	26.12	3.4	3.4

Note:

Projected graduates were reported by respondents as the number of students/ trainees expected to graduate or otherwise successfully expected to complete the program in 1976, 1977, and 1978.

Text Table 15 - Mean Projected Graduates for 14 Selected Occupations

Occupational Title	Mean Projected Graduates 1976	1977	1978	Percent Change 1976-1977	1977-1978
Nurse Aide/Orderly	28.58	29.92	30.56	4.7	2.1
Registered Nurse	47.02	48.75	52.89	3.7	8.5
NS-Coronary Care/Intensive Care*	25.57	27.68	29.11	8.3	5.2
Emergency Medical Technician	63.30	64.48	65.25	1.9	1.2
Unit Clerk	14.94	14.50	15.28	- 2.9	5.4
Licensed Practical Nurse	29.77	31.64	32.14	6.3	1.6
Radiologic Technologist/Technician	6.89	7.44	8.44	8.0	13.4
Medical Technologist	8.02	8.35	8.65	4.1	3.6
Clinical Pastoral Counselor	12.21	13.93	14.75	14.1	5.9
Psychiatric Technician	38.59	39.28	35.17	1.8	-10.5
Nurse Anesthetist	6.05	6.25	6.69	3.3	7.0
Respiratory Therapy Technician	6.82	8.93	9.67	30.9	8.3
Dietitian	4.53	4.84	5.32	6.8	9.9
Operating Room Technician	6.33	7.18	7.35	13.4	2.4

*Nurse Specialty-Coronary Care/Intensive Care

Note: Projected graduates were reported by respondents as the estimated number of students/trainees expected to graduate or otherwise successfully expected to complete the program in 1976, 1977, and 1978.

and to increase in the following period. The mean projected graduates for Psychiatric Technician were down for 1978. Respiratory Therapy Technician programs projected the highest rate of increase for 1976 to 1977 followed by Clinical Pastoral Counselor and Operating Room Technician.

Part 2

Selected Occupations

The 14 occupational titles selected for more extensive analyses represented 77 percent of the reported allied health occupations programs, accounted for 88 percent of the expected graduates in 1976, and were offered in the greatest number of hospitals (text tables 3 and 12).

Seven major characteristics were studied for the 14 selected programs, the results are presented in tables B-1 through B-28, section V. The data items covered in these tables included framework characteristics and content characteristics. Framework characteristics included accreditation status, award, frequency of conducting program, program requirements, and program finances. Content characteristics included students, graduates, and hours of instruction.

Six of these 14 occupations were chosen for further analysis and for comparisons with the 1973 survey results. The occupations selected for this review were nurse specialty-coronary care/intensive care, emergency medical technician, clinical pastoral counselor, dietitian, nurse aide/orderly, and radiologic technologist/technician.

Four occupations were of special interest, as each displayed a large increase in the number of training programs reported since this survey was originally conducted in 1973. Training programs in nurse specialty-coronary care/intensive care increased 379 percent, clinical pastoral counselor programs increased 390 percent, emergency medical technician programs increased 129 percent, and dietitian programs increased 156 percent over 1973 data. It can be seen from the following discussions that the framework and content characteristics of these programs have varied little since the 1973 survey, (text tables 16 through 23).

Factors such as changes in the questionnaire and greater program demand were considered as the causes of these increases. Two occupations, nurse aide/orderly and radiologic technologist/technician were of special interest as they displayed the largest decline in the number of training programs reported since 1973. Training programs in nurse aide/orderly decreased by 20 percent and radiologic technologist/technician programs decreased by 13 percent over 1973 data.

Nurse Specialty-Coronary Care/Intensive Care

In 1973, 86 programs were reported for nurse specialty training in coronary care and intensive care units. In 1976, the number of programs increased to 412. Part of the increase can be accounted for by the inception of 175 programs which began after 1973 and may not have been included in the 1973 survey. Furthermore it may be that in 1973 respondents excluded many programs because they incorrectly considered the training to be "continuing education." This problem was apparently remedied in 1976 by slight changes in the phrasing of the questionnaire and by intensive telephone queries. It is also important to note that only 133 training programs in nurse specialty-coronary care/intensive care were identified by the 1973 screener questionnaire compared to 734 in the 1976 screener questionnaire. Possibly, not all the existing programs in this occupation were reported in 1973 since "nurse specialty-coronary care/intensive care" was not named specifically on the 1973 screener questionnaire.

The data reported that none of the nurse specialty-coronary care/intensive care programs in 1973 and in 1976 were accredited. No nationally recognized accrediting body for this occupational area existed during the two survey periods. In 1973, 73 percent of the programs conferred an award on students successfully completing

Text Table 16 - Nurse Specialty - Coronary Care/Intensive Care Program Characteristics, 1973 and 1976
1973 - 86 Programs 1976 - 412 Programs

	Number		Percent	
	1973	1976	1973	1976
Accreditation Status				
Programs reporting	85	412	100.0	100.0
Program is accredited	0	0	0.0	0.0
Program is not accredited	85	412	100.0	100.0
Award				
Programs reporting	86	411	100.0	100.0
Award is conferred	63	338	73.3	82.
Award is not conferred	23	73	26.7	17.8
Frequency				
Programs reporting	86	412	100.0	100.0
No regular schedule	42	193	48.8	46.8
Once a year	11	62	12.8	15.0
More than once a year	33	151	38.4	36.7
Other schedule	*	6		1.5
Program Prerequisites				
Programs reporting	85	412	100.0	100.0
No requirements	6	1	7.0	0.2
Some high school	0	0	0.0	0.0
High school graduate	1	68	1.2	16.5
Some college	0	76	0.0	18.4
Bachelor's degree	0	2	0.0	0.5
Graduate degree	0	0	0.0	0.0
Seminary education	0	0	0.0	0.0
Other academic education	0	0	0.0	0.0
Radiologic Technologist preparation	0	0	0.0	0.0
Medical Technologist preparation	0	0	0.0	0.0
Registered Nurse preparation	64	410	75.3	99.5
LPN (LVN) training	19	162	22.4	39.3
Nursing aide training	0	0	0.0	0.0
Other specific health training	0	7	0.0	1.7

* Not comparable - 1973 category was labeled "Less than once a year".

Text Table 17 - Nurse Specialty - Coronary Care/Intensive Programs
Students and Hours of Instruction

	Number Reporting	Mean
Students and Graduates		
Students enrolled October, 1973	39	11.39
Students enrolled April, 1976	139	16.84
Graduates		
1973	261	23.16
1974	311	24.17
1975	357	24.21
Projected Graduates		
1976	374	25.57
1977	351	27.68
1978	329	29.10
Hours of Instruction		
Total hours of instruction - 1973	86	186.76
Total hours of instruction - 1976	412	186.29

the training program. In 1976, 82 percent conferred an award. Class schedules followed a similar pattern for the two survey periods. Forty-nine percent of the programs in 1973 and 47 percent of the programs in 1976 were not conducted on any regularly scheduled basis. Thirteen percent of the programs in 1973 and 15 percent of the programs in 1976 were offered once a year. In 1973, 38 percent of the programs were conducted more than once a year compared to 37 percent in 1976.

In 1973, 98 percent of the programs required the student/trainee to be either a registered nurse or a licensed practical nurse for entry into the program. Almost 100 percent of the programs in 1976 designated registered nurse training as a program prerequisite. Forty percent of the nurse specialty-coronary care/ intensive care also designated licensed practical nurse preparation as an acceptable program prerequisite. Various minimum education levels in addition to the specific health training requirements were reported. Six programs in 1973 and one program in 1976 had no educational or previous health training requirements for program admission.

In 1973, 45 percent of the nurse specialty-coronary care/intensive care programs reported a class in progress as of October 1973. In 1976, only 34 percent of the 1976 survey programs reported a class in progress as of April 1976. The mean class size was about 11 in 1973 and approximately 17 in 1976, an increase of 55 percent over the 1973 class size. This might indicate more active training of students by existing programs in addition to expanding numbers of programs.

Data results from the 1976 study indicated an increase in the average number of students to be trained each year. In 1973, the average number to complete training was approximately 23, while the average number of expected graduates for 1978 was slightly more than 29.

The average number of hours to complete the nurse specialty-coronary care/ intensive care program in 1973 was 187. In 1976, an average of 186 hours of training was required for completion.

Clinical Pastoral Counselor

There were 29 clinical pastoral counselor programs reported in the 1973 survey, and 142 programs reported in the 1976 study. Part of the increase is due to 50 new programs that came into existence since 1973. Also important is the format of the clinical pastoral counselor training programs. Many were composed of a basic level program and as many as three advanced level programs with each level lasting approximately three months. Successful completion of the previous level is required for entry into a more advanced level, with each progressive level program providing increasingly specialized training. Of the 142 clinical pastoral counselor programs reported in 1976, sixteen were advanced level training programs. Another factor generating this apparent increase in clinical pastoral counselor programs was the nature of the occupation. It seemed likely that respondents excluded many of the 1973 survey programs because they did not consider their training to involve a field of allied health as this was a problem that arose during the 1976 survey. Numerous enquiries were received by the staff of the AHA from directors of the clinical pastoral counselor programs regarding the meaning of allied health after the 1976 screener questionnaire was mailed. As a result, concentrated efforts were made to ensure that these programs were included.

Finally, it should be noted that only 19 programs for clinical pastoral counselling were identified on the 1973 screener questionnaire, compared to 202 potential programs identified on the 1976 screener questionnaire.

Text Table 18 - Clinical Pastoral Counselor Program Characteristics, 1973 and 1976
1973 - 29 Programs 1976 - 142 Programs

	Number		Percent	
	1973	1976	1973	1976
Accreditation Status				
Programs reporting	29	142	100.0	100.0
Program is accredited	29	135	100.0	95.1
Program is not accredited	0	7	0.0	4.9
Award				
Programs reporting	29	142	100.0	100.0
Award is conferred	28	124	96.6	87.3
Award is not conferred	1	18	3.4	12.7
Frequency				
Programs reporting	29	142	100.0	100.0
No regular schedule	2	6	6.9	4.2
Once a year	10	43	34.5	30.3
More than once a year	17	90	58.6	63.4
Other schedule	*	3		2.1
Program Prerequisites				
Programs reporting	29	142	100.0	100.0
No requirements	0	0	0.0	0.0
Some high school	0	0	0.0	0.0
High school graduate	0	0	0.0	0.0
Some college	0	0	0.0	0.0
Bachelor's degree	4	19	13.8	13.4
Graduate degree	25	0	86.2	0.0
Seminary education	0	121	0.0	85.2
Other academic education	0	3	0.0	2.1
Radiologic Technologist preparation	0	0	0.0	0.0
Medical Technologist preparation	0	0	0.0	0.0
Registered Nurse preparation	0	0	0.0	0.0
LPN (LVN) training	0	0	0.0	0.0
Nursing Aide training	0	0	0.0	0.0
Other specific health training	0	11	0.0	7.7

*Not comparable - 1973 category was labeled "Less than once a year".

Text Table 19 - Clinical Pastoral Counselor Programs, Students and Hours of Instruction

	Number Reporting	Mean
Students and Graduates		
Students enrolled October, 1973	23	5.04
Students enrolled April, 1976	101	6.21
Graduates		
1973	98	10.92
1974	111	11.36
1975	118	12.25
Projected Graduates		
1976	136	12.21
1977	131	13.93
1978	133	14.75
Hours of Instruction		
Total hours of instruction - 1973	29	1404.52
Total hours of instruction - 1976	142	725.51

All of the clinical pastoral counselor programs in 1973 and 95 percent of the programs in 1976 were accredited. In 1973, 97 percent of the clinical pastoral counselor programs granted awards to their students upon completion of the program. A slightly lower proportion, 87 percent, granted awards in 1976. Fifty-nine percent of the programs in 1973 and 63 percent of the programs in 1976 were conducted more than once a year. Comparable percents, 35 in 1973 and 30 in 1976, were offered more than once a year.

All of the clinical pastoral counselor programs in 1973 and 1976 had some educational or previous health training requirements for program admission. In both studies, about 13 percent of the programs listed a bachelor's degree as a requirement. However, in 1973, 86 percent required the applicant to have a graduate degree, and in 1976, 79 percent required seminary education. Since seminary education was not one of the possible choices listed on the 1973 questionnaire, it seemed possible that respondents checked graduate degree as a close approximation.

Seventy-nine percent of the clinical pastoral counselor programs in 1973 reported having a class in progress as of October 1973, with an approximate class size of five students. Seventy-one percent of the programs in 1976 reported having a class in progress as of April 1976. The mean class size in 1976 was 6.

The average clinical pastoral counselor program in 1973 required approximately 1400 hours of instruction, but the average program in 1976 required only a little over 700 hours of instruction, half the length of time reported in 1973. It seems plausible to attribute the differences in average hours per program in 1976 to the separation of the programs into levels.

Data from the 1976 survey indicated a general increase from 1973 to 1978 in the number of programs reporting graduates. The number of students completing the program each year increased from approximately 11 in 1973 to almost 15 expected in 1978.

Emergency Medical Technician

The number of emergency medical technician training programs increased 127 percent from the 1973 survey to the 1976 survey. Forty-eight programs reported in 1973 and 110 programs were reported in 1976. The 1976 survey data indicated that 89 new programs for emergency medical technicians have been started since 1973.

There has been a national trend for emergency medical technician training beyond the basic level. The advanced level training prepares the emergency medical technician to function as a paramedic. In 1973 the basic and advanced levels were reported as a single program. Thirteen of the 110 programs reported in 1976 were advanced level programs. On the 1973 screener questionnaire 108 emergency medical technician programs were reported, whereas on the 1976 screener questionnaire, 233 programs were identified, an increase of 125 programs.

None of the emergency medical technician programs reported in 1973 and 1976 were accredited. No nationally recognized accrediting body for this occupational area existed during the two survey periods. Data from both surveys showed that most programs, 85 percent in 1973 and 88 percent in 1976, granted awards to those successfully completing the programs.

There was a change in class schedules over the two survey periods. In 1973 the majority of the programs were offered on an unscheduled basis (54 percent). In 1976 only 35 percent were offered on an unscheduled basis with the largest per-

Text Table 20 - Emergency Medical Technician Program Characteristics, 1973 and 1976
1973 - 48 Programs 1976 - 110 Programs

	Number		Percent	
	1973	1976	1973	1976
Accreditation Status				
Programs reporting	48	110	100.0	100.0
Program is accredited	0	0	0.0	0.0
Program is not accredited	48	110	100.0	100.0
Award				
Programs reporting	48	110	100.0	100.0
Award is conferred	41	97	85.4	88.2
Award is not conferred	7	13	14.6	11.8
Frequency				
Programs reporting	48	110	100.0	100.0
No regular schedule	26	38	54.2	34.5
Once a year	11	22	22.9	20.0
More than once a year	11	45	22.9	40.9
Other schedule	*	5		4.5
Programs Prerequisites				
Programs reporting	43	110	100.0	100.0
No requirements	8	35	18.6	31.8
Some high school	7	4	16.3	3.6
High school graduate	26	55	60.5	50.0
Some college	1	0	2.3	0.0
Bachelor's degree	0	1	0.0	0.9
Seminary education	0	0	0.0	0.0
Other academic education	0	2	0.0	1.8
Radiologic Technologist preparation	0	0	0.0	0.0
Medical Technologist preparation	0	0	0.0	0.0
Registered Nurse preparation	1	0	2.3	0.0
LPN (LVN) training	0	0	0.0	0.0
Nursing Aide Training	0	2	0.0	1.8
Other specific health training	0	42	0.0	38.2

*Not comparable - 1973 category was labeled "Less than once a year."

Text Table 21, Emergency Medical Technician Programs, Students and Hours of Instruction

	Number Reporting	Mean
Students and Graduates		
Students enrolled October, 1973	18	37.56
Students enrolled April, 1976	61	42.28
Graduates		
1973	46	45.61
1974	67	58.51
1975	82	68.49
Projected Graduates		
1976	102	63.30
1977	95	64.48
1978	85	65.25
Hours of Instruction		
Total hours of instruction - 1973	47	226.15
Total hours of instruction - 1976	110	188.07

centage, 41 percent, offered more than once a year. This greater frequency of class sessions seems to be in accordance with the overall increase in number of training programs.

Program prerequisites for entry into an emergency medical technician program also underwent variations. The programs which had no educational or previous health training requirements for admission increased from 19 percent in 1973 to 32 percent in 1976. The 1973 data indicated that of those which did have program prerequisites, 16 percent required the applicant to have completed some high school for entry into the program and 61 percent required the applicant to have completed high school. The 1976 data showed that only 4 percent required the completion of some high school and 50 percent required a high school diploma. Approximately 38 percent of the programs required some previous health training as a prerequisite for admission into the program, either experience as an ambulance attendant or first aid training.

Thirty-eight percent of the emergency medical technician programs in 1973 reported students enrolled as of October 1973, with an average class size of about 38 students. In 1976, 56 percent reported students enrolled as of April 1976, and the average class size was approximately 42.

The 1976 data indicated a general increase in the average number of students to be trained was approximately 46, while the mean projected graduates for 1978 was about 65. The largest average number trained was reported for 1975 with over 68 graduates. There was a decrease in the average hours required to complete the program. The average program in 1973 required 226 hours, in 1976 188 hours.

Dietitian

In 1973, 27 dietitian programs and 30 dietitian/nutritionist programs were reported, a combined total of 57 programs. In 1976, 146 dietitian programs were reported. This was an increase of 157 percent. Following recommendations from the American Dietetic Association, the category of dietitian/nutritionist was not included in the 1976 Glossary of Occupational Titles. The American Dietetic Association suggested that the title "nutritionist" be considered a job title, and "dietitian" be the generic term that includes the work of a nutritionist. The results from this study do include two programs classified as Nutritionist. Therefore, it seemed appropriate to combine the 1973 data for the dietitian and dietitian/nutritionist programs for purposes of this analysis. It was also assumed that these titles caused the 1973 respondents some confusion. The increase in the number of dietitian programs was due to (1) 91 programs started since 1973 and (2) to problems that arose in 1973 over the term "independently administered." Respondents felt that although they were approved by the American Dietetic Association to conduct the practicum portion of a dietitian's training, the American Dietetic Association retained considerable control over the trainee's course of study, and they were uncertain whether their program was actually "independently administered." It should be noted that while 103 dietitian/nutritionist programs were identified on the 1973 screener questionnaire, 220 programs were reported on the 1976 screener.

The characteristics of the dietitian programs were similar for the two survey periods. Ninety-seven percent of the programs in both 1973 and in 1976 were accredited. In 1973, 84 percent of the programs granted an award to students who successfully completed the program and in 1976, 58 percent granted an award. In both surveys, the largest percentage of dietitian programs were offered once

Text Table 22 - Dietitian Program Characteristics, 1973 and 1976[1]

1973-57 Programs 1976-146 Programs

	Number		Percent	
	1973	1976	1973	1976
Accreditation Status				
Programs reporting	57	146	100.0	100.0
Program is accredited	55	141	96.5	96.6
Program is not accredited	2	5	3.5	3.4
Award				
Programs reporting	57	146	100.0	100.0
Award is conferred	48	85	84.2	58.2
Award is not conferred	9	61	15.8	41.8
Frequency				
Programs reporting	57	146	100.0	100.0
No regular schedule	18	26	31.0	17.8
Once a year	26	100	45.6	68.5
More than once a year	9	16	15.8	11.0
Other schedule	*	4		2.7
Program Prerequisites				
Programs reporting	57	146	100.0	100.0
No requirements	0	0	0.0	0.0
Some high school	0	0	0.0	0.0
High school graduate	0	0	0.0	0.0
Some college	0	0	0.0	0.0
Bachelor's degree	57	143	100.0	97.9
Graduate degree	0	3	0.0	2.1
Seminary education	0	0	0.0	0.0
Other academic education	0	0	0.0	0.0
Radiologic Technologist preparation	0	0	0.0	0.0
Medical Technologist preparation	0	0	0.0	0.0
Registered Nurse preparation	0	0	0.0	0.0
LPN (LVN) training	0	0	0.0	0.0
Nursing Aide Training	0	0	0.0	0.0
Other specific health training	0	0	0.0	0.0

1. 1973 figures based on combined Dietitian and Dietitian/Nutritionist Programs.

* Not comparable - 1973 category was labeled "Less than once a year."

Text Table 23 - Dietitian Programs, Students and Hours of Instruction

	Number Reporting	Mean
Students and Graduates		
Students enrolled October, 1973	51	6.21
Students enrolled April, 1976	118	4.53
Graduates		
1973	60	6.88
1974	89	5.46
1975	120	4.64
Projected Graduates		
1976	129	4.53
1977	121	4.84
1978	110	5.32
Hours of Instruction		
Total hours of instruction - 1973	55	2163.45
Total hours of instruction - 1976	146	1854.49

a year. Forty-four percent of the programs in 1973 and 69 percent of the programs in 1976 were offered once a year.

A bachelor's degree was required for admission into all of the dietitian programs for 1973 and 1976 with the exception of three programs reported in 1976 which required the applicant to have a master's degree.

Ninety percent of the programs reported a class in progress as of October 1973, with an average class size of six students. Based on the 1976 survey, 81 percent of the programs had students enrolled as of April 1976, and the mean class size was about five. The average dietitian program in 1973 required 2,200 hours of instruction and in 1976, approximately 1,900 hours of instruction.

Nurse Aide/Orderly

There were 883 nurse aide/orderly programs reported on the 1973 survey and 726 were reported on the 1976 survey. Part of this decrease can be attributed to differences in the occupational title classifications used in the two survey periods. In 1973 three titles were used to identify nurse aide/orderly programs. The titles used in the 1973 study were as follows: nurse aide, orderly, and nurse aide/orderly. In 1976 these separate titles were combined into one general classification because of similarities in the occupational descriptions of the 1973 titles. For purpose of this analysis the 1976 nurse aide/orderly data are compared with the combined 1973 nurse aide, orderly, and nurse aide/orderly data (text tables 24 and 25). In addition, respondents have reported the following as reasons for the decline in nurse aide/orderly programs: (1) sharing of the training programs among hospitals to avoid the duplication of educational costs and (2) the administration of these programs by Vocational schools, High schools and Junior colleges, with the hospital providing only the clinical portion of the training.

Nurse aide/orderly programs are not standardized across the country, nor does a nationally recognized accrediting body exist for this field. None of the programs are accredited in either 1973 or 1976. In 1973 one half of the programs conferred an award on the student successfully completing the training program. In 1976 sixty-five percent conferred an award.

Class schedule followed similar patterns for the two survey periods with 75 percent in 1973 and 80 percent in 1976 conducting programs on an irregular basis. In 1973, 4 percent of the program and in 1976, 5 percent were conducted once a year. Twenty-one percent of the programs in 1973 were conducted more than once a year and in 1976, 13 percent. In 1973, 22 percent of the programs had no requirements for entry, 32 percent required some high school, and 43 percent required the applicant to be a high school graduate. In 1976, 33 percent had no requirements, 17 percent required some high school, and 41 percent required high school graduation. In 1973, 4 percent and in 1976, 3 percent required other academic training. In the 1976 survey two additional prerequisites were reported with 2 programs reporting other specific health training, and 12 percent reporting nurse aide preparation. The nurse aide preparation meant training in the nurse aide/orderly field for entry into a more advanced level position.

Thirty-seven percent of the nurse aide/orderly programs from the 1973 survey reported a class in progress as of October 1973, while only 26 percent of the 1976 survey programs reported a class in progress as of April, 1976. The mean class size was about 9.5 in 1973 and about 11.5 in 1976.

Data results from the 1976 survey do indicate a general increase in the average number of students to be trained with a mean average of 28.6 percent in 1976, 29.9 percent in 1977, and 30.6 percent in 1978.

Text Table 24 - Nurse Aide/Orderly Program Characteristics, 1973 and 1976
1973 - 883 programs 1976 - 726 programs

	Number		Percent	
	1973	1976	1973	1976
Accreditation Status				
Programs reporting	874	726	100.0	100.0
Program is accredited	0	0	0.0	0.0
Program is not accredited	874	726	100.0	100.0
Award				
Programs reporting	881	726	100.0	100.0
Award is conferred	440	471	50.0	64.9
Award is not conferred	441	255	50.0	35.1
Frequency				
Programs reporting	883	726	100.0	100.0
No regular schedule	662	578	75.0	79.6
Once a year	34	35	3.9	4.8
More than once a year	184	96	20.8	13.2
Other schedule	*	17		2.3
Program Prerequisites				
Programs reporting	868	726	100.0	100.0
No requirements	190	238	21.9	32.8
Some high school	273	120	31.5	16.5
High school graduate	371	298	42.7	41.0
Some college	0	0	0.0	0.0
Bachelor's degree	0	0	0.0	0.0
Graduate degree	0	0	0.0	0.0
Seminary education	0	0	0.0	0.0
Other academic education	34	24	3.9	3.3
Radiologic Technologist preparation	0	0	0.0	0.0
Medical Technologist preparation	0	0	0.0	0.0
Registered Nurse preparation	0	0	0.0	0.0
LPN (LVN) training	0	0	0.0	0.0
Nursing Aide training	0	90	0.0	12.4
Other specific health training	0	2	0.0	0.3

*Not comparable - 1973 category was labeled "Less than once a year".

Text Table 25 - Nurse Aide/Orderly Programs, Students and Hours of Instruction

	Number Reporting	Mean
Students and Graduates		
Students enrolled October, 1973	327	9.466
Students enrolled April, 1976	186	11.457
Graduates		
1973	537	34.600
1974	595	35.635
1975	628	29.395
Projected Graduates		
1976	607	28.575
1977	540	29.915
1978	510	30.559
Hours of Instruction		
Total hours of instruction - 1973	882	202.358
Total hours of instruction - 1976	726	243.207

The average number of hours to complete the training program was 202 in 1976 and 243 in 1976.

Radiologic Technologist/Technician

In 1973, 534 programs were reported for radiologic technologist/technician. In 1976 the number had decreased to 461 (text tables 26 and 27). There are several reasons reported by hospitals for this decrease. Many hospitals are developing affiliation agreements with junior and senior colleges with the hospital acting only as the clinical setting. Hospitals report that with the program lasting 24 months, the program is not only expensive to operate, but the attrition rate is high. Seldom do the programs graduate a full class.

Ninety-nine percent of the programs in both survey years were accredited. In 1973 and 1976 only one percent of the programs did not grant an award to the student successfully completing the program. Class schedules were similar in the two surveys with the greatest number, 91 percent in 1973 and 93 percent in 1976, offering the program once a year. In 1976, 2 percent of the programs were offered on an irregular basis (3 percent in 1973). About 5 percent of the programs were offered more than once a year. Approximately 1 percent of the 1976 programs were offered on "Other Schedule" which was a caregory appearing for the first time in 1976.

Less than 1 percent of programs in 1973 and 1976 had no requirements for entry. Less than 2 percent of the programs in 1973 and 1976 required some college, 99 percent of the programs in 1976 (98 percent in 1973) required the applicants to be a high school graduate.

From the 1973 survey 99 percent of the radiologic technologist/technician programs reported a class in progress as of October, 1973 and 99 percent of

Text Table 26 - Radiologic Technologist/Technician Program Characteristics, 1973 and 1976
1973 - 534 Programs 1976 - 461 Programs

	Number		Percent	
	1973	1976	1973	1976
Accreditation Status				
Programs reporting	530	461	100.0	100.0
Program is accredited	523	458	98.7	99.3
Program is not accredited	7	3	1.3	0.7
Award				
Programs reporting	534	461	100.0	100.0
Award conferred	527	456	98.7	98.9
Award not conferred	7	5	1.3	1.1
Frequency				
Programs reporting	534	461	100.0	100.0
No regular schedule	16	7	3.0	1.5
Once a year	485	430	90.8	93.3
More than once a year	28	21	5.2	4.6
Other schedule	*	3		0.7
Program Prerequisites				
Programs reporting	533	461	100.0	100.0
No requirements	2	2	0.4	0.4
Some high school	0	0	0.0	0.0
High school graduate	523	453	98.1	98.7
Some college	8	6	1.5	1.3
Bachelor's degree	0	0	0.0	0.0
Graduate degree	0	0	0.0	0.0
Seminary education	0	0	0.0	0.0
Other academic education	0	0	0.0	0.0
Radiologic Technologist preparation	0	0	0.0	0.0
Medical Technologist preparation	0	0	0.0	0.0
Registered Nurse preparation	0	0	0.0	0.0
LPN (LVN) training	0	0	0.0	0.0
Nurse Aide training	0	0	0.0	0.0
Other specific health training	0	0	0.0	0.0

Text Table 27 - Radiologic Technologist/Technician, Students and Hours of Instruction

	Number Reporting	Mean
Students and Graduates		
Students enrolled October, 1973	529	14.057
Students enrolled April, 1976	456	13.789
Graduates		
1973	432	7.042
1974	441	7.034
1975	442	6.966
Projected Graduates		
1976	444	6.892
1977	446	7.439
1978	437	8.435
Hours of Instruction		
Total hours of instruction - 1973	534	3909.588
Total hours of instruction - 1976	461	3936.464

the 1976 programs reported a class in progress as of April 1976. The mean class size in 1973 was 14.1 and in 1976, 13.8.

Data results from the 1976 survey do show a general increase in the average number of students to be trained with a mean average of 6.9 in 1976, 7.4 in 1977 and 8.4 in 1978.

The average program in 1973 required 3,910 total hours of training, and in 1976 3,936 total hours of training.

SECTION III

PROBLEMS AND THEIR SOLUTIONS

The 1976 Survey of Health Occupations Training Programs in Hospitals was conducted with the intention of gaining a comprehensive overview of all types of hospital-administered programs from a national perspective. The findings from the study indicate that hospital administered occupational programs (114 Occupational Titles) cover a very broad range of skills and technical expertise in the fields of nursing and allied health. The various types of occupational programs consequently reflect this technical difference in terms of program structure and academic tone. The instruments utilized in the study were broad and flexible in order to execute the goals of the project. Five program criteria had to be exhibited by a program for it to be included in the study. The five criteria taken together function loosely to indicate the degree of formality required for each program. The major problem with the study was that the absence of precise definitions for the program criteria resulted in varying interpretations of the determinants in terms of the goals of the project. Because of these variations, potentially more programs exist than have been included in this study.

The instruments used in this project have been revised from those used in the 1973 survey. The effect of the revisions was to minimize the formal academic tone of the questionnaire and to clarify each of the 5 criteria in order to emphasize that marginally formal programs are within the scope of the study. The designation of an individual enrolled in an allied health occupations training program as either a student or trainee was developed so that those programs that have more of a clinical emphasis (on the job training) than an actual didactic (classroom) situation would be included. Even with the increased emphasis on making the inclusion process sufficiently broad to cover the comprehensive activities of

hospitals in manpower training, respondents commented that there was confusion as to the types of programs to be included and the requisite structure of these programs.

In reviewing each of the five program criteria, the elements for exclusion are technically very minimal. The final survey results, however, revealed that only 52 percent of the potential programs identified during the screening process have been included in findings.

Criterion 1 specified that the programs must be operational or ready to be put into operation as of April 15, 1976. The phrase "ready to be put into operation" was added to the condition "operational" used to identify programs in the 1973 survey. The additional condition was meant to include those programs that are offered only as needed.

Criterion 2 specified that the program must be independently administered by a hospital. This distinction was important to avoid duplication with the American Society of Allied Health Professions where junior and senior colleges were concerned.

Criterion 3 specified that the program must be of at least 36 hours of instruction and based on a written outline. With the inclusion of probationary hours as a component of the total hours required to complete the program in the 1976 survey (questions9a and 9b) respondents could calculate total hours based solely on probationary time. The additional stipulation of a written outline, in conjunction with the requirement of 36 hours was meant to impose a degree of formality over all programs. The concept of the written outline determining the direction of the program was not clear to many respondents. After following up on problems concerning the outline, through telephone conversation with the respondents, AHA staff found that the major area of confusion was not whether an outline existed

but the degree of sophistication required.

Criterion 4 specified that the program be designated to train persons in the fields of nursing or allied health. During the screening process the staff of the AHA determined whether or not a particular occupation fit the category of allied health. The basis for making this decision was very broad. An allied health or nursing occupation was any of those included in the glossary of occupationary titles or any occupation the practioneers of which function at professional, technical, or supportive levels to supplement the activities of physicians, dentists, and registered nurses. The field of allied health and nursing does not necessarily mean direct patient contact. In the final analysis only those programs focusing on maintenance or central service staff were eliminated (18 programs).

Criterion 5 specified that the program prepare people for service in an occupation or at an occupational skill level that is new to them (excluding those programs that are primarily orientation, refresher courses and continuing education). There is no universal agreement on what orientation, refresher courses and continuing education mean in the field of allied health. The findings from the 1973 survey indicated that many occupational programs included aspects of orientation, refresher courses, and continuing education. The word "primarily" was inserted in the statement of this criterion to exclude those programs that are totally any of the above.

The following are the definitions for orientation, refresher courses, and continuing education used in this project:

Orientation - Orientation consists of activities aimed at acquainting individuals with overall goals and services of the hospital, the relationship among and within

departments, the contribution of an individual employee's position to these goals and services, and the benefits and responsibilities of an employee to the hospital.

Refresher Training - Such training is designed for those individuals who need a program to renew their skills and knowledge.

Continuing Education - Such education is the process by which health personnel seek to improve their skill, their knowledge, or their sensitivity in order to perform competently at a level abreast with new developments in their field.

These definitions were used by the staff of the AHA to make decisions about questionable programs in this area. The definitions, however, were not communicated to the respondents through the survey instruments, and it is consequently now known how consistently these criteria were applied. For instance, a special situation existed regarding continuing education and nurse specialty programs. Since a national professional nursing association grants continuing education units or classifies advance or specialized nursing programs as continuing education, some respondents indicated that their programs were excluded because of this terminology. In actuality a new skill level is attained, within the nursing field, by those who complete the programs and such programs, when they were identified by AHA staff were included in the survey.

The application of the 5 criteria tended to exclude programs on an arbitrary basis and not on precise technicalities. The problem is that, although the data and respondents' comments indicate how broadly the program determinants have been interpreted, information was not requested to determine why certain programs were excluded. The following comments highlight the problem. "We

have included our program because it seems to fit, although we are not certain that it should be included" and "We have returned our questionnaires blank because our program did not seem to fit the purposes of this survey." The first comment pertains to a program that was included in these findings; the second comment pertains to a program that was not included. The staff of the AHA contacted 600 programs where there was a question regarding the purpose of this study. Considering the numerous data problems with the 4,826 programs included in this study, staff could not contact approximately 4,500 cases to determine whether the exclusions were legitimate or only misinterpretations of the degree of formality required for inclusion.

The magnitude of the overall misinterpretation of the purpose of the study by respondents is difficult to assess precisely based only on comments by respondents. The 1976 report includes data on only 52 percent of the total 9,252 programs identified in stage I.

On the assumption that the program determinants were sufficiently broad to include most programs, there are two general design problems that more accurately account for the discrepancy between the universe and the final data results. (1) The purpose and scope of the project should be further clarified. Many respondents commented that their program did not apply because either their admissions policy was restricted only to employees or that their program was conducted only as needed. These same respondents perceived the purpose of this project only as the collection of data necessary to compile a directory of hospital administered programs. These same respondents thought that because their programs operated solely for their own needs and with their

own personnel, the programs should be excluded from a general directory. (2) The detailed questionnaire is too long and requires too much time to complete. The time factor is compounded for those institutions receiving questionnaires for more than one program. Approximately 300 respondents commented that their questionnaires were returned with no information because they did not have time to complete them.

To rectify these problems, the project should be clarified by including a detailed sheet of instructions stating goals of the project. These goals are to publish a directory and to collect data from a national data base on specific educational variables on hospital-administered programs. The instructions should emphasize that not all questions are applicable given the structure of some programs. The questionnaire should be shortened. Eliminating those questions, except for the items to be included in the directory: program accreditation, award conferred, program duration, year program began, entry restrictions, program prerequisites, times program offered per year, tuition, VA approval, enrollment 4/15/76, graduates 1975, projected graduates 1976, and capacity of the program would shorten the form considerably and yet provide valuable information.

With the design of the present project, the determination of an allied health occupations training program depends on the respondents' understanding of the five program criteria. The statement of the program determinants on the detailed questionnaire should be revised. The effect of the revisions should leave the decision about the inclusion of potential programs to the staff of the AHA. The changes would ensure that all programs are evaluated for inclusion on the same basis. The following changes in the program determinants

and detailed questionnaire design are suggested.

Question 2a, "Is the program operational or ready to be put into operation?" should be rephrased as follows: "If the program has not yet been put into operation, please estimate the year the first class of students/trainees will be accepted." Questions 7a and 7b, used to gain a historical perspective on each program, should be combined as follows: Please indicate the year in which the program accepted its first class. If date is not known, estimate the year. Question 7B "If data is not known, please estimate the number of years the programs has been in operation" could be eliminated.

Question 2b, "Is the program independently administered by the hospital (Not part of a junior or senior college degree program, cooperative program with a high school/vocational school, or a correspondence course)" should be retained. This question should be positioned so that it precedes question 8a and 8b, "As part of this program, do students/trainees receive any part of their education/training at another institution?" and question 10a and 10b, "Does the student/trainee who successfully completes the program receive an award?". If a great deal of time is spent at various other institutions and if nonhospital institutions confer an award, then the independent administrative status of such a program is questionable.

Question 2c, "Is the program at least 36 clock hours of total instruction, based on written outline ?" should be excluded. Information on the total months or weeks necessary to complete the program and the total required hours spent receiving instruction throughout the program is available from question 9a and 9b. A new question, however, should be included requesting respondents to indicate whether there exists a formal written outline that determines a

consistant direction for the program.

Question 2d, "Is the program designed to train persons in the fields of nursing or allied health?" should also be eliminated. The determination of an allied health occupation was made by the AHA staff during the screening process. If data are being reported for a nonallied health occupation, this fact will be known when the respondent is asked to give a definition of the occupation for which the students are being trained (Question 3a).

Question 2E, "Does the program prepare persons for service in an occupation or at an occupational skill level new to them (Excludes programs that are primarily orientation, refresher courses, and continuing education)" should be redrafted as the following sequential questions.

"Are the students/trainees receiving instruction for the first time in an occupation or at an occupational skill level, as specified on the cover of the questionnaire?"

"Is the greater proportion of the students' time spent in learning technical skills that would be applicable in the general field of allied health, or is their training specifically related to the organization of your hospital?"

"Upon completion of the program, do the graduates function in an occupation or at an occupational skill level new to them?"

This series of questions should follow the present section on education and/or specific health training prerequisites. The question whether program entry is restricted to hospital employees should also be included in this

section.

If the program determinants are rephrased in this way and integrated into the questionnaire, they should present a more obvious correlation with the data items. This correlation does not exist with the present questionnaire. Such a correlation would provide for a better operational understanding of hospital training programs. With the above revisions, detailed information could be collected on all potential training programs.

The rephrased program determinants should be included on the sheet of instructions stating the goals of the project. The sheet of instructions should be sent with both the screener and detailed questionnaires. By describing during the screening process the actual type of program to be included within the scope of the project, the discrepancy between the screener results and the final data results should be minimized. The major purpose of the changes would be to ensure that all programs would be considered for inclusion on the same basis.

SECTION IV

RECOMMENDATIONS FOR FUTURE RESEARCH

The Division of Information Services of the American Hospital Association was requested, on the basis of its findings from the 1976 Survey of Health Occupations Training Programs in Hospitals, to make recommendations for continued research in the area of hospital manpower training programs. The following recommendations are based both on staff analysis and respondent's reaction to the project.

The results from the study documented the comprehensive activities of hospitals in health manpower training. Currently, hospitals and various types of academic institutions are involved in the training of allied health manpower. In order to determine the appropriate extent of allied health manpower training as a function of hospitals a more accurate measurement of supply and demand should be developed.

The following areas of the supply and demand of allied health manpower deserve attention. Consideration should be given to the actual number and types of specific occupational areas within the field of allied health. Further investigation is necessary to delineate the technical scope of these occupational areas. How is the manpower base affected in the evolution of the health care field? Are the practioneers retrained in related areas when certain occupational areas become obsolete? What are the causes affecting the attrition rate of manpower in the health care field? How great is the rate of attrition? Assuming that the attrition rate is high, could changes be incorporated into the educational/training system to

reduce this situation? How is the supply and demand relationship affected by the trend toward licensing and credentialing of allied health manpower? Greater detail is also needed on the number of allied health trainees who were offered employment in an area for which they were trained. What percentage of allied health trainees are employed by the hospital sector of the health care industry? What role do hospitals perform in the placement of trainees from hospital programs and other types of programs? How efficiently are the allied health trainees placed in the health care field and what mechanisms exist to facilitate placement?

There is an implicit assumption underlying a supply and demand relationship applicable to the health care field. This assumption is that the resulting technical competencies are similar from both hospital and academic programs. Additional inquiry is necessary to determine if there are differences and, if so, what aspects of program structure account for the differences? Is it possible that personnel trained in hospital programs function more efficiently in certain occupational areas than do academically trained personnel? What additional preparation is necessary before allied health trainees can begin functioning at a particular health care institution? Is the orientation program required for new employees less in cost and time for hospital trained personnel than for academic trained personnel because of the added experiental learning that takes place in a hospital setting? Is the overall educational cost for extensive orientation/on-the-job training programs to each hospital greater if the hospital has no control over the basic (preparatory) education of the manpower? Is increased cooperation needed between the hospitals and academic institutions to ensure that competently trained manpower is available through the most cost efficient methods? What would be the administrative

structure resulting from such cooperation? Finally, are there nontechnical aspects, such as salary structure, that increase the demand for personnel trained in one type of institution over another? Is efficient performance affected by these differences?

A method to analyze both the costs and benefits of hospital manpower training programs should be developed. Included should be long-range manpower planning so that hospitals can be assured of a quality work force. Models of the most cost efficient training methods should be developed to maximize production. What aspects of hospital-administered programs determine the cost? Is there a difference in cost between those programs that are formally structured as compared to the informal, offered only as needed programs? Does a correlation exist between hospitals with formal departments of education and the costs of the training programs? What factors within the hospital determines the existence of a formalized department of education? Is a hospital with such a department more likely to receive funding for educational programs? Is it more cost effective? What external sources of funding (governmental, etc.) are available to hospital programs? What is the ideal percentage of manpower training that can realistically be assumed by the hospitals? How do the costs for conducting hospital programs compare with other types of health manpower training? Are the benefits from hospital programs passed on to the consumers in terms of better care and reduced charges?

The basic (preparatory) training of allied health manpower is one component of the education role of hospitals. Programs must be implemented, in addition to basic training, to orient new personnel to both the operation and organization of a particular hospital, the preparation needed for the

actual job with the institution, programs to ensure the continual availability of personnel trained in current techniques and methods of health care delivery and programs geared towards learning new skills and knowledge. Future research should also focus on the overall educational services of hospitals necessary to ensure a quality work force. Methods to facilitate the interrelationships between the various educational components should be developed to ensure maximum effectiveness.

HEALTH OCCUPATIONS TRAINING PROGRAMS

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Table B-28 Respiratory Therapy Technician:Content Characteristics

Table A-1

Program Requirements
4,826 Programs

Admission Restricted	Number	Percent
Programs reporting	4,825	100.0
Admission restricted to employees	1,680	34.8
Admission not restricted	3,145	65.2
Program Prerequisites		
Programs reporting	4,826	100.0
Program prerequisites	4,340	89.9
No program prerequisites	486	10.1
Specific Educational Level and/or Health Training Required		
Programs reporting	4,340	100.0
Some high school	195	4.5
High school graduate	2,410	55.5
Less than 2 years of college	59	1.4
2 years of college	104	2.4
Associate degree	134	3.1
3 years of college	305	7.0
4 years of college	16	0.4
Bachelor's degree	342	7.9
Master's degree	14	0.3
Ph.D. or Ph.D. candidate	17	0.4
Seminary education	121	2.8
Other academic education	58	1.3
Radiologic Technologist preparation	87	2.0
Medical Technologist preparation	71	1.6
Registered Nurse preparation	758	17.5
LPN (LVN) training	265	6.1
Nursing aide training	180	4.1
Other specific health training	171	3.9
Total prerequisites reported	5,307	
Programs with only one requirement	3,572	
Programs with additional requirements	768	

Table A-2

Program Characteristics
4,826 Programs

Accreditation Status	Number	Percent
Programs reporting	4,826	100.0
Program is accredited	1,922	39.8
Program is not accredited	2,904	60.2
Award		
Programs reporting	4,825	100.0
Award conferred	3,592	74.4
Award not conferred	1,233	25.6
Frequency of Conducting Programs		
Programs reporting	4,826	100.0
No regular schedule	2,039	42.3
Once a year	1,893	39.2
More than once a year	787	16.3
Other schedule	107	2.2
Type of Program		
Programs reporting	4,826	100.0
Basic Occupational preparation	3,753	77.8
Advanced education or training	1,073	22.2
Class in Progress April 15, 1976	2,911	60.3

Table A-3

Program Finances
4,826 Programs

	Number	Percent
Veterans Administration Approval		
Programs reporting	4,774	100.0
Approval	1,460	30.6
No approval	3,314	69.4
Tuition Charge		
Programs reporting	4,824	100.0
Tuition	1,352	28.0
No tuition	3,472	72.0

Table A-4

Program Status
4,826 Programs

Program Capacity Changes	Number	Percent
Total reporting	4,817	100.0
No change is planned	3,685	76.5
Program is being expanded	702	14.6
Program is being reduced to size	156	3.2
Program is being merged with another program	113	2.3
Program is being eliminated	161	3.3

TABLE A-5. PROGRAMS BY OCCUPATIONAL TITLE AND REGION

OCCUPATIONAL TITLE	TOTAL	REGION					
		NEW ENGLAND	MIDDLE ATLANTIC	SOUTH ATLANTIC	EAST NORTH CENTRAL	EAST SOUTH CENTRAL	WEST NORTH CENTRAL
ALL OCCUPATIONS	4,826	354	932	651	1,259	239	514
ADMINISTRATION, PLANNING, AND OFFICE	449	28	76	58	156	25	37
HOSPITAL ASSISTANT ADMINISTRATOR	2	0	1	1	0	0	0
MEDICAL/DENTAL SECRETARY	1	0	1	0	0	0	0
UNIT CLERK	423	25	68	55	146	25	36
UNIT MANAGER	23	3	6	2	10	0	1
BIOMEDICAL ENGINEERING	1	0	1	0	0	0	0
BIOMEDICAL ENGINEERING TECHNICIAN	1	0	1	0	0	0	0
CLINICAL LABORATORY SERVICES	617	40	101	76	157	31	45
BLOOD BANK TECHNOLOGIST	24	1	4	5	7	2	1
CHEMISTRY TECHNOLOGIST	1	0	0	0	0	0	0
CYTOTECHNOLOGIST	50	4	9	7	11	2	4
ELECTRON MICROSCOPY TECHNICIAN	1	0	1	0	0	0	0
HEMATOLOGY TECHNOLOGIST	3	1	2	0	0	0	0
HISTOLOGIC TECHNICIAN	76	1	12	12	21	3	9
MEDICAL LABORATORY ASSISTANT	61	3	17	14	11	7	1
MEDICAL LABORATORY TECHNICIAN	24	1	13	2	4	1	1
MEDICAL TECHNOLOGIST	376	29	43	16	99	20	29
MICROBIOLOGY TECHNOLOGIST	1	0	0	0	0	1	0
DENTAL SERVICES	2	0	0	1	0	0	0
DENTAL ASSISTANT	1	0	0	0	0	0	0
MAXILLOFACIAL PROSTHODONTIA TECH	1	0	0	1	0	0	0

TABLE A-5. PROGRAMS BY OCCUPATIONAL TITLE AND REGION

OCCUPATIONAL TITLE	TOTAL	REGION					
		NEW ENGLAND	MIDDLE ATLANTIC	SOUTH ATLANTIC	EAST NORTH CENTRAL	EAST SOUTH CENTRAL	WEST NORTH CENTRAL
DIETETIC AND NUTRITIONAL SERVICES	195	15	29	24	54	9	22
DIETARY AIDE	33	0	7	5	13	2	2
DIETETIC ASSISTANT	6	0	2	1	1	0	1
DIETETIC TECHNICIAN	8	2	1	0	4	0	0
DIETITIAN	146	13	19	18	34	7	19
NUTRITIONIST	2	0	0	0	2	0	0
EMERGENCY SERVICES	113	9	21	3	44	3	15
AMBULANCE ATTENDANT	3	0	0	0	2	0	0
EMERGENCY MEDICAL TECHNICIAN	110	9	21	3	42	3	15
INFORMATION AND COMMUNICATION	3	1	1	0	1	0	0
MEDICAL PHOTOGRAPHER	3	1	1	0	1	0	0
MED INSTRUMENTATION-MACHINE OPERATION	163	10	25	23	45	7	15
CARDIOPULMONARY TECHNICIAN	10	2	0	2	2	1	0
CIRCULATION TECHNOLOGIST	2	1	1	0	0	0	0
DIALYSIS TECHNICIAN	33	1	7	3	10	1	2
ELECTROCARDIOGRAPHIC TECHNICIAN	63	4	6	11	19	2	6
EEG/EKG TECHNICIAN	9	1	1	2	3	0	0
EEG TECHNOLOGIST/TECHNICIAN	44	1	9	4	11	3	7
PULMONARY FUNCTION TECHNICIAN	2	0	1	1	0	0	0
MEDICAL RECORDS	34	2	3	7	9	1	1
MEDICAL RECORD ADMINISTRATOR	1	0	0	1	0	0	0
MEDICAL RECORD TECHNICIAN	5	0	1	1	1	0	1
MEDICAL TRANSCRIPTIONIST	28	2	2	5	8	1	2

TABLE A-5. PROGRAMS BY OCCUPATIONAL TITLE AND REGION

OCCUPATIONAL TITLE	TOTAL	REGION: NEW ENGLAND	MIDDLE ATLANTIC	SOUTH ATLANTIC	EAST NORTH CENTRAL	EAST SOUTH CENTRAL	WEST NORTH CENTRAL
MENTAL HEALTH	236	17	46	30	73	9	33
CLINICAL PSYCHOLOGIST	21	2	3	4	4	1	1
HUMAN SERVICES TECHNOLOGIST/TECH	1	0	1	0	0	0	0
MENTAL HEALTH ADMINISTRATOR	2	0	0	0	2	0	0
MENTAL HEALTH ASSOCIATE/TECH/ASST	18	2	1	3	6	0	2
MENTAL HEALTH TECHNOLOGIST	11	0	0	0	10	0	1
MENTAL RETARDATION AIDE	18	0	6	2	5	1	3
PSYCHIATRIC TECHNICIAN	165	13	35	21	46	7	26
NUCLEAR MEDICINE	78	2	11	11	21	2	10
NUC MED TECHNOLOGIST/TECHNICIAN	78	2	11	11	21	2	10
NURSING AND RELATED SERVICES	1,430	125	328	196	344	80	148
GERIATRIC CARE WORKER	2	0	0	1	0	0	1
LICENSED PRACTICAL NURSE	112	11	23	19	13	1	3
NURSE AIDE/ORDERLY	726	49	138	89	192	50	81
NURSE ANESTHETIST	116	11	37	20	19	6	13
NURSE MIDWIFE	2	0	1	0	0	1	0
NURSE PRACTITIONER	20	5	4	3	5	0	0
OBSTETRICAL TECHNICIAN	15	2	3	4	3	0	2
OPERATING ROOM TECHNICIAN	139	9	27	30	39	9	10
REGISTERED NURSE	298	38	95	30	73	13	38
NURSE SPECIALTIES AND OTHER RELATED	606	47	133	85	124	34	53
CARDIOPULMONARY PERFUSIONIST	1	0	0	1	0	0	0
CLINICIAN	1	0	0	0	1	0	0
CORONARY CARE	4	0	0	2	2	0	0
CORONARY CARE/INTENSIVE CARE	412	32	92	53	79	28	44

TABLE A-5. PROGRAMS BY OCCUPATIONAL TITLE AND REGION

OCCUPATIONAL TITLE	TOTAL	REGION					
		NEW ENGLAND	MIDDLE ATLANTIC	SOUTH ATLANTIC	EAST NORTH CENTRAL	EAST SOUTH CENTRAL	WEST NORTH CENTRAL
DERMATOLOGY	1	0	0	0	0	0	1
DIABETES	1	0	0	0	0	0	0
EMERGENCY	4	1	0	0	1	0	0
ENTERSTOMAL THERAPY	4	0	2	0	0	0	0
FAMILY NURSE/PHYSICAL ASSESSMENT	2	0	0	1	0	1	0
GERIATRIC	1	0	0	0	0	1	0
HEAD NURSE DEVELOPMENT	2	0	0	1	1	0	0
HEMODIALYSIS/RENAL DIALYSIS	61	3	17	6	12	3	3
HIGH RISK MATERNITY	1	0	0	0	0	0	0
INTENSIVE CARE	4	0	0	2	2	0	0
INTRAVENOUS TECHNICIAN	27	5	11	3	5	0	1
MONITOR TECHNICIAN	2	0	0	1	0	0	0
NEONATAL INTENSIVE	9	0	1	3	0	0	1
NEUROLOGICAL/NEUROSURGICAL	4	1	2	0	1	0	0
NEWBORN/PEDIATRIC	1	0	0	1	0	0	0
OBSTETRIC/GYNECOLOGY	2	0	0	0	0	0	0
ONCOLOGY	4	0	0	0	1	0	0
PHARMACOLOGY	34	3	2	7	13	1	3
PSYCHIATRIC	8	0	4	2	0	0	0
REHABILITATION	1	0	0	0	1	0	0
RESPIRATORY CARE	2	1	1	0	0	0	0
SURGICAL	9	0	1	2	2	0	0
THORACIC/VASCULAR	1	1	0	0	0	0	0
TRAUMA	3	0	0	0	3	0	0

TABLE A-5. PROGRAMS BY OCCUPATIONAL TITLE AND REGION

OCCUPATIONAL TITLE	TOTAL	REGION					
		NEW ENGLAND	MIDDLE ATLANTIC	SOUTH ATLANTIC	EAST NORTH CENTRAL	EAST SOUTH CENTRAL	WEST NORTH CENTRAL
VISION CARE	5	0	2	2	1	0	0
OPHTHALMIC ASSISTANT/TECHNICIAN	2	0	0	1	1	0	0
ORTHOPTIST	3	0	2	1	0	0	0
PHARMACY SERVICES	77	11	8	13	26	2	4
MEDICATION PHARMACY TECHNICIAN	5	1	0	4	0	0	0
PHARMACIST	10	2	1	1	2	0	1
PHARMACY TECHNICIAN	62	8	7	8	24	2	3
PHYSICIAN EXTENDER PERSONNEL	7	1	1	0	1	0	0
PHYSICIAN ASSISTANT-PRIMARY CARE	5	1	1	0	1	0	0
PHYSICIAN ASSISTANT-SPECIALTY	2	0	0	0	0	0	0
RADIOLOGICAL SERVICES	494	24	107	81	122	21	67
RAD THER TECHNOLOGIST/TECHNICIAN	30	0	5	3	6	2	3
RADIOLOGIC TECHNOLOGIST/TECHNICIAN	461	24	101	78	115	19	64
ULTRASOUND TECHNICAL SPECIALIST	3	0	1	0	1	0	0
REHABILITATION-OCCUPATIONAL	3	0	0	1	0	0	1
OCCUPATIONAL THERAPIST	2	0	0	1	0	0	0
OCCUPATIONAL THERAPY ASSISTANT	1	0	0	0	0	0	1
REHABILITATION-PHYSICAL	11	0	4	1	2	0	2
ORTHOPEDIC TECHNICIAN	2	0	0	0	2	0	0
ORTHOTIC/PROSTHETIC TECHNICIAN	2	0	2	0	0	0	0
ORTHOTIST/PROSTHETIST	2	0	1	0	0	0	1
PHYSICAL THERAPIST	1	0	0	1	0	0	0
PHYSICAL THERAPY ASSISTANT	4	0	1	0	0	0	1

TABLE A-5. PROGRAMS BY OCCUPATIONAL TITLE AND REGION

OCCUPATIONAL TITLE	TOTAL	REGION					
		NEW ENGLAND	MIDDLE ATLANTIC	SOUTH ATLANTIC	EAST NORTH CENTRAL	EAST SOUTH CENTRAL	WEST NORTH CENTRAL
REHABILITATION-OTHER	6	0	1	1	1	0	2
ART THERAPIST	1	0	0	0	1	0	0
MUSIC THERAPIST	1	0	0	0	0	0	1
RECREATIONAL THERAPIST	4	0	1	1	0	0	1
RESPIRATORY THERAPY SERVICES	119	8	21	17	36	6	14
RESPIRATORY THERAPIST	12	1	3	0	4	0	3
RESPIRATORY THERAPY TECHNICIAN	107	7	18	17	32	6	11
SOCIAL SERVICES AND COUNSELING	174	14	13	21	41	9	43
ALCOHOL/DRUG ABUSE SPECIALIST	19	2	1	0	6	1	7
CHILD CARE WORKER	4	0	1	0	0	0	0
CLINICAL PASTORAL COUNSELOR	142	11	9	21	34	8	36
FAMILY COUNSELOR	1	0	0	0	0	0	0
HOMEMAKER/HOME HEALTH AIDE	3	1	1	0	0	0	0
MEDICAL SOCIAL WORKER	2	0	1	0	0	0	0
PSYCHIATRIC SOCIAL WORKER	1	0	0	0	0	0	0
REHABILITATION COUNSELOR	1	0	0	0	1	0	0
SOCIAL WORK ASSOCIATE	1	0	0	0	0	0	0
SPEECH AND HEARING SERVICES	2	0	0	0	0	0	0
AUDIOLOGIST	1	0	0	0	0	0	0
SPEECH PATHOLOGIST	1	0	0	0	0	0	0
VETERINARY SERVICES	1	0	0	0	1	0	0
LABORATORY ANIMAL WORKER	1	0	0	0	1	0	0

TABLE A-5. PROGRAMS BY OCCUPATIONAL TITLE AND REGION

OCCUPATIONAL TITLE	REGION			
	WEST SOUTH CENTRAL	MOUNTAIN	PACIFIC	ASSOCIATED AREAS
ALL OCCUPATIONS	329	179	357	12
ADMINISTRATION, PLANNING, AND OFFICE	80	21	16	2
HOSPITAL ASSISTANT ADMINISTRATOR	0	0	0	0
MEDICAL/DENTAL SECRETARY	0	0	0	0
UNIT CLERK	80	20	16	2
UNIT MANAGER	0	1	0	0
BIOMEDICAL ENGINEERING	0	0	0	0
BIOMEDICAL ENGINEERING TECHNICIAN	0	0	0	0
CLINICAL LABORATORY SERVICES	51	22	94	0
BLOOD BANK TECHNOLOGIST	2	1	1	0
CHEMISTRY TECHNOLOGIST	0	0	1	0
CYTOTECHNOLOGIST	7	1	5	0
ELECTRON MICROSCOPY TECHNICIAN	0	0	0	0
HEMATOLOGY TECHNOLOGIST	0	0	0	0
HISTOLOGIC TECHNICIAN	7	2	7	0
MEDICAL LABORATORY ASSISTANT	7	1	3	0
MEDICAL LABORATORY TECHNICIAN	1	1	0	0
MEDICAL TECHNOLOGIST	27	16	77	0
MICROBIOLOGY TECHNOLOGIST	0	0	0	0
DENTAL SERVICES	0	0	1	0
DENTAL ASSISTANT	0	0	1	0
MAXILLOFACIAL PROSTHODONTIA TECH	0	0	0	0

TABLE A-5. PROGRAMS BY OCCUPATIONAL TITLE AND REGION

OCCUPATIONAL TITLE	REGION			
	WEST SOUTH CENTRAL	MOUNTAIN	PACIFIC	ASSOCIATED AREAS
DIETETIC AND NUTRITIONAL SERVICES	12	9	21	0
DIETARY AIDE	1	1	2	0
DIETETIC ASSISTANT	0	0	1	0
DIETETIC TECHNICIAN	0	1	0	0
DIETITIAN	11	7	18	0
NUTRITIONIST	0	0	0	0
EMERGENCY SERVICES	7	7	3	1
AMBULANCE ATTENDANT	1	0	0	0
EMERGENCY MEDICAL TECHNICIAN	6	7	3	1
INFORMATION AND COMMUNICATION	0	0	0	0
MEDICAL PHOTOGRAPHER	0	0	0	0
MED INSTRUMENTATION-MACHINE OPERATION	13	13	11	1
CARDIOPULMONARY TECHNICIAN	0	2	1	0
CIRCULATION TECHNOLOGIST	0	0	0	0
DIALYSIS TECHNICIAN	2	3	3	1
ELECTROCARDIOGRAPHIC TECHNICIAN	6	4	5	0
EEG/EKG TECHNICIAN	1	1	0	0
EEG TECHNOLOGIST/TECHNICIAN	4	3	2	0
PULMONARY FUNCTION TECHNICIAN	0	0	0	0
MEDICAL RECORDS	2	1	6	0
MEDICAL RECORD ADMINISTRATOR	0	0	0	0
MEDICAL RECORD TECHNICIAN	0	0	1	0
MEDICAL TRANSCRIPTIONIST	2	1	5	0

TABLE A-5. PROGRAMS BY OCCUPATIONAL TITLE AND REGION

OCCUPATIONAL TITLE	REGION			
	WEST SOUTH CENTRAL	MOUNTAIN	PACIFIC	ASSOCIATED AREAS
MENTAL HEALTH	8	9	10	1
CLINICAL PSYCHOLOGIST	2	1	3	0
HUMAN SERVICES TECHNOLOGIST/TECH	0	0	0	0
MENTAL HEALTH ADMINISTRATOR	0	0	0	0
MENTAL HEALTH ASSOCIATE/TECH/ASST	0	2	2	0
MENTAL HEALTH TECHNOLOGIST	0	0	0	0
MENTAL RETARDATION AIDE	0	1	0	0
PSYCHIATPIC TECHNICIAN	6	5	5	1
NUCLEAR MEDICINE	6	3	12	0
NUC MED TECHNOLOGIST/TECHNICIAN	6	3	12	0
NURSING AND PELATED SERVICES	117	39	51	2
GERIATRIC CARE WORKER	0	0	0	0
LICENSED PRACTICAL NURSE	36	2	4	0
NURSE AIDE/ORDERLY	60	31	35	1
NURSE ANESTHETIST	6	0	3	1
NURSE MIDWIFE	0	0	0	0
NURSE PRACTITIONER	0	0	3	0
OBSTETRICAL TECHNICIAN	1	0	0	0
OPERATING ROOM TECHNICIAN	10	4	1	0
REGISTERED NURSE	4	2	5	0
NURSE SPECIALTIES AND OTHER RELATED	33	22	71	4
CARDIOPULMONARY PERFUSIONIST	0	0	0	0
CLINICIAN	0	0	0	0
CORONARY CARE	0	0	0	0
CORONARY CARE/INTENSIVE CARE	17	18	45	4

TABLE A-5. PROGRAMS BY OCCUPATIONAL TITLE AND REGION

OCCUPATIONAL TITLE	REGION			
	WEST SOUTH CENTRAL	MOUNTAIN	PACIFIC	ASSOCIATED AREAS
DERMATOLOGY	0	0	0	0
DIABETES	0	0	1	0
EMERGENCY	1	0	1	0
ENTERSTOMAL THERAPY	1	1	0	0
FAMILY NURSE/PHYSICAL ASSESSMENT	0	[illegible]	0	0
GERIATRIC	0	0	0	0
HEAD NURSE DEVELOPMENT	0	0	0	0
HEMODIALYSIS/RENAL DIALYSIS	4	2	11	0
HIGH RISK MATERNITY	0	0	1	0
INTENSIVE CARE	0	0	0	0
INTRAVENOUS TECHNICIAN	0	1	1	0
MONITOR TECHNICIAN	0	0	1	0
NEONATAL INTENSIVE	2	0	2	0
NEUROLOGICAL/NEUROSURGICAL	0	0	0	0
NEWBORN/PEDIATRIC	0	0	0	0
OBSTETRIC/GYNECOLOGY	1	0	1	0
ONCOLOGY	1	0	2	0
PHARMACOLOGY	1	0	4	0
PSYCHIATRIC	2	0	0	0
REHABILITATION	0	0	0	0
RESPIRATORY CARE	0	0	0	0
SURGICAL	3	0	1	0
THORACIC/VASCULAR	0	0	0	0
TRAUMA	0	0	0	0

TABLE A-5. PROGRAMS BY OCCUPATIONAL TITLE AND REGION

OCCUPATIONAL TITLE	REGION			
	WEST SOUTH CENTRAL	MOUNTAIN	PACIFIC	ASSOCIATED AREAS
VISION CARE	0	0	0	0
OPHTHALMIC ASSISTANT/TECHNICIAN	0	0	0	0
ORTHOPTIST	0	0	0	0
PHARMACY SERVICES	3	2	8	0
MEDICATION PHARMACY TECHNICIAN	0	0	0	0
PHARMACIST	0	0	3	0
PHARMACY TECHNICIAN	3	2	5	0
PHYSICIAN EXTENDER PERSONNEL	0	2	2	0
PHYSICIAN ASSISTANT-PRIMARY CARE	0	2	0	0
PHYSICIAN ASSISTANT-SPECIALTY	0	0	2	0
RADIOLOGICAL SERVICES	25	17	30	0
RAD THER TECHNOLOGIST/TECHNICIAN	1	3	7	0
RADIOLOGIC TECHNOLOGIST/TECHNICIAN	23	14	23	0
ULTRASOUND TECHNICAL SPECIALIST	1	0	0	0
REHABILITATION-OCCUPATIONAL	0	1	0	0
OCCUPATIONAL THERAPIST	0	1	0	0
OCCUPATIONAL THERAPY ASSISTANT	0	0	0	0
REHABILITATION-PHYSICAL	1	0	1	0
ORTHOPEDIC TECHNICIAN	0	0	0	0
ORTHOTIC/PROSTHETIC TECHNICIAN	0	0	0	0
ORTHOTIST/PROSTHETIST	0	0	0	0
PHYSICAL THERAPIST	0	0	0	0
PHYSICAL THERAPY ASSISTANT	1	0	1	0

TABLE A-5. PROGRAMS BY OCCUPATIONAL TITLE AND REGION

OCCUPATIONAL TITLE	REGION			
	WEST SOUTH CENTRAL	MOUNTAIN	PACIFIC	ASSOCIATED AREAS
REHABILITATION-OTHER	0	1	0	0
ART THERAPIST	0	0	0	0
MUSIC THERAPIST	0	0	0	0
RECREATIONAL THERAPIST	0	1	0	0
RESPIRATORY THERAPY SERVICES	10	5	1	1
RESPIRATORY THERAPIST	0	1	0	0
RESPIRATORY THERAPY TECHNICIAN	10	4	1	1
SOCIAL SERVICES AND COUNSELING	11	5	17	0
ALCOHOL/DRUG ABUSE SPECIALIST	0	1	1	0
CHILD CARE WORKER	3	0	0	0
CLINICAL PASTORAL COUNSELOR	7	3	13	0
FAMILY COUNSELOR	0	0	1	0
HOMEMAKER/HOME HEALTH AIDE	0	1	0	0
MEDICAL SOCIAL WORKER	0	0	1	0
PSYCHIATRIC SOCIAL WORKER	1	0	0	0
REHABILITATION COUNSELOR	0	0	0	0
SOCIAL WORK ASSOCIATE	0	0	1	0
SPEECH AND HEARING SERVICES	0	0	2	0
AUDIOLOGIST	0	0	1	0
SPEECH PATHOLOGIST	0	0	1	0
VETERINARY SERVICES	0	0	0	0
LABORATORY ANIMAL WORKER	0	0	0	0

TABLE A-6. PROGRAMS BY OCCUPATIONAL TITLE AND NUMBER OF BEDS

OCCUPATIONAL TITLE	TOTAL	NUMBER OF BEDS						
		6- 49	50- 99	100-199	200-299	300-399	400-499	500 OR MORE
ALL OCCUPATIONS	4,826	77	200	643	870	794	659	1,583
ADMINISTRATION, PLANNING, AND OFFICE	449	2	19	77	87	68	66	130
HOSPITAL ASSISTANT ADMINISTRATOR	2	0	0	0	0	0	0	2
MEDICAL/DENTAL SECRETARY	1	0	0	1	0	0	0	0
UNIT CLERK	423	2	19	76	87	64	60	115
UNIT MANAGER	23	0	0	0	0	4	6	13
BIOMEDICAL ENGINEERING	1	0	0	0	0	0	0	1
BIOMEDICAL ENGINEERING TECHNICIAN	1	0	0	0	0	0	0	1
CLINICAL LABORATORY SERVICES	617	1	14	57	112	116	114	203
BLOOD BANK TECHNOLOGIST	24	0	0	0	1	3	3	17
CHEMISTRY TECHNOLOGIST	1	0	0	0	0	0	0	1
CYTOTECHNOLOGIST	50	0	0	1	6	6	8	29
ELECTRON MICROSCOPY TECHNICIAN	1	0	0	0	0	0	0	1
HEMATOLOGY TECHNOLOGIST	3	0	0	0	0	0	0	3
HISTOLOGIC TECHNICIAN	76	0	0	3	6	15	17	35
MEDICAL LABORATORY ASSISTANT	61	1	4	10	23	5	8	10
MEDICAL LABORATORY TECHNICIAN	24	0	4	9	6	2	1	2
MEDICAL TECHNOLOGIST	376	0	6	34	70	84	77	105
MICROBIOLOGY TECHNOLOGIST	1	0	0	0	0	1	0	0
DENTAL SERVICES	2	0	1	0	0	1	0	0
DENTAL ASSISTANT	1	0	1	0	0	0	0	0
MAXILLOFACIAL PROSTHODONTIA TECH	1	0	0	0	0	1	0	0

TABLE A-6. PROGRAMS BY OCCUPATIONAL TITLE AND NUMBER OF BEDS

OCCUPATIONAL TITLE	TOTAL	NUMBER OF BEDS						
		6- 49	50- 99	100-199	200-299	300-399	400-499	500 OR MORE
DIETETIC AND NUTRITIONAL SERVICES	195	1	1	16	33	32	24	88
DIETARY AIDE	33	0	1	3	8	6	1	14
DIETETIC ASSISTANT	6	1	0	0	1	1	0	3
DIETETIC TECHNICIAN	8	0	0	2	0	0	1	5
DIETITIAN	146	0	0	11	24	25	22	64
NUTRITIONIST	2	0	0	0	0	0	0	2
EMERGENCY SERVICES	113	4	12	25	25	13	15	19
AMBULANCE ATTENDANT	3	0	1	1	1	0	0	0
EMERGENCY MEDICAL TECHNICIAN	110	4	11	24	24	13	15	19
INFORMATION AND COMMUNICATION	3	0	0	0	0	1	0	2
MEDICAL PHOTOGRAPHER	3	0	0	0	0	1	0	2
MED INSTRUMENTATION-MACHINE OPERATION	163	0	4	15	22	37	28	57
CARDIOPULMONARY TECHNICIAN	10	0	0	2	1	2	1	4
CIRCULATION TECHNOLOGIST	2	0	0	0	0	0	1	1
DIALYSIS TECHNICIAN	33	0	0	2	7	5	5	14
ELECTROCARDIOGRAPHIC TECHNICIAN	63	0	3	8	10	17	9	16
EEG/EKG TECHNICIAN	9	0	1	1	0	2	3	2
EEG TECHNOLOGIST/TECHNICIAN	44	0	0	2	4	11	8	19
PULMONARY FUNCTION TECHNICIAN	2	0	0	0	0	0	1	1
MEDICAL RECORDS	34	0	1	1	10	4	4	14
MEDICAL RECORD ADMINISTRATOR	1	0	0	1	0	0	0	0
MEDICAL RECORD TECHNICIAN	5	0	0	0	3	1	0	1
MEDICAL TRANSCRIPTIONIST	28	0	1	0	7	3	4	13

TABLE A-6. PROGRAMS BY OCCUPATIONAL TITLE AND NUMBER OF BEDS

OCCUPATIONAL TITLE	TOTAL	NUMBER OF BEDS						
		6- 49	50- 99	100-199	200-299	300-399	400-499	500 OR MORE
MENTAL HEALTH	236	10	8	19	24	12	18	145
CLINICAL PSYCHOLOGIST	21	1	1	1	4	0	3	11
HUMAN SERVICES TECHNOLOGIST/TECH	1	0	0	0	0	1	0	0
MENTAL HEALTH ADMINISTRATOR	2	0	0	0	1	0	0	1
MENTAL HEALTH ASSOCIATE/TECH/ASST	18	1	3	4	1	2	3	4
MENTAL HEALTH TECHNOLOGIST	11	1	0	1	3	0	0	6
MENTAL RETARDATION AIDE	18	1	0	1	0	1	0	15
PSYCHIATRIC TECHNICIAN	165	6	4	12	15	8	12	108
NUCLEAR MEDICINE	78	0	0	4	10	7	5	52
NUC MED TECHNOLOGIST/TECHNICIAN	78	0	0	4	10	7	5	52
NURSING AND RELATED SERVICES	1,430	45	80	206	269	255	170	405
GERIATRIC CARE WORKER	2	0	0	0	1	0	0	1
LICENSED PRACTICAL NURSE	112	12	14	21	16	15	5	29
NURSE AIDE/ORDERLY	726	28	61	139	138	109	70	181
NURSE ANESTHETIST	116	0	0	9	17	25	15	50
NURSE MIDWIFE	2	1	0	0	0	0	0	1
NURSE PRACTITIONER	20	3	0	1	2	2	3	9
OBSTETRICAL TECHNICIAN	15	0	0	1	4	8	1	1
OPERATING ROOM TECHNICIAN	139	1	3	11	25	33	27	39
REGISTERED NURSE	298	0	2	24	66	63	49	94
NURSE SPECIALTIES AND OTHER RELATED	606	7	35	111	121	92	76	164
CARDIOPULMONARY PERFUSIONIST	1	0	0	0	0	0	1	0
CLINICIAN	1	0	0	0	0	0	0	1
CORONARY CARE	4	0	0	0	0	0	2	2
CORONARY CARE/INTENSIVE CARE	412	6	31	92	89	62	44	88

TABLE A-6. PROGRAMS BY OCCUPATIONAL TITLE AND NUMBER OF BEDS

OCCUPATIONAL TITLE	TOTAL	NUMBER OF BEDS						
		6- 49	50- 99	100-199	200-299	300-399	400-499	500 OR MORE
DERMATOLOGY	1	0	0	0	0	0	0	1
DIABETES	1	0	0	1	0	0	0	0
EMERGENCY	4	0	0	0	0	1	2	1
ENTERSTOMAL THERAPY	4	0	0	0	2	0	0	2
FAMILY NURSE/PHYSICAL ASSESSMENT	2	1	0	0	0	1	0	0
GERIATRIC	1	0	0	0	0	0	0	1
HEAD NURSE DEVELOPMENT	2	0	0	0	0	0	0	2
HEMODIALYSIS/RENAL DIALYSIS	61	0	0	4	14	10	9	24
HIGH RISK MATERNITY	1	0	0	0	0	1	0	0
INTENSIVE CARE	4	0	0	0	0	0	2	2
INTRAVENOUS TECHNICIAN	27	0	0	2	9	2	4	10
MONITOR TECHNICIAN	2	0	0	0	0	0	0	2
NEONATAL INTENSIVE	9	0	0	2	0	2	2	3
NEUROLOGICAL/NEUROSURGICAL	4	0	0	0	0	2	1	1
NEWBORN/PEDIATRIC	1	0	0	0	0	1	0	0
OBSTETRIC/GYNECOLOGY	2	0	0	0	0	0	1	1
ONCOLOGY	4	0	0	1	1	1	0	1
PHARMACOLOGY	34	0	3	7	4	4	7	9
PSYCHIATRIC	8	0	0	1	0	0	1	6
REHABILITATION	1	0	0	0	1	0	0	0
RESPIRATORY CARE	2	0	0	0	0	1	0	1
SURGICAL	9	0	0	1	0	2	0	6
THORACIC/VASCULAR	1	0	0	0	0	1	0	0
TRAUMA	3	0	1	0	1	1	0	0

TABLE A-6. PROGRAMS BY OCCUPATIONAL TITLE AND NUMBER OF BEDS

OCCUPATIONAL TITLE	TOTAL	NUMBER OF BEDS						
		6- 49	50- 99	100-199	200-299	300-399	400-499	500 OR MORE
VISION CARE	5	0	0	1	0	0	2	2
OPHTHALMIC ASSISTANT/TECHNICIAN	2	0	0	0	0	0	1	1
ORTHOPTIST	3	0	0	1	0	0	1	1
PHARMACY SERVICES	77	0	1	7	11	12	18	28
MEDICATION PHARMACY TECHNICIAN	5	0	0	1	0	2	1	1
PHARMACIST	10	0	0	1	1	1	1	6
PHARMACY TECHNICIAN	62	0	1	5	10	9	16	21
PHYSICIAN EXTENDER PERSONNEL	7	0	0	2	1	0	1	3
PHYSICIAN ASSISTANT-PRIMARY CARE	5	0	0	2	0	0	0	3
PHYSICIAN ASSISTANT-SPECIALTY	2	0	0	0	1	0	1	0
RADIOLOGICAL SERVICES	494	0	11	67	102	98	71	145
RAD THER TECHNOLOGIST/TECHNICIAN	30	0	0	2	4	1	2	21
RADIOLOGIC TECHNOLOGIST/TECHNICIAN	461	0	11	65	98	97	68	122
ULTRASOUND TECHNICAL SPECIALIST	3	0	0	0	0	0	1	2
REHABILITATION-OCCUPATIONAL	3	0	1	0	0	0	0	2
OCCUPATIONAL THERAPIST	2	0	1	0	0	0	0	1
OCCUPATIONAL THERAPY ASSISTANT	1	0	0	0	0	0	0	1
REHABILITATION-PHYSICAL	11	0	1	4	0	1	0	5
ORTHOPEDIC TECHNICIAN	2	0	0	0	0	1	0	1
ORTHOTIC/PROSTHETIC TECHNICIAN	2	0	0	2	0	0	0	0
ORTHOTIST/PROSTHETIST	2	0	0	0	0	0	0	2
PHYSICAL THERAPIST	1	0	0	1	0	0	0	0
PHYSICAL THERAPY ASSISTANT	4	0	1	1	0	0	0	2

TABLE A-6. PROGRAMS BY OCCUPATIONAL TITLE AND NUMBER OF BEDS

OCCUPATIONAL TITLE	TOTAL	NUMBER OF BEDS						
		6- 49	50- 99	100-199	200-299	300-399	400-499	500 OR MORE
REHABILITATION-OTHER	6	0	1	1	1	0	0	3
ART THERAPIST	1	0	0	1	0	0	0	0
MUSIC THERAPIST	1	0	0	0	0	0	0	1
RECREATIONAL THERAPIST	4	0	1	0	1	0	0	2
RESPIRATORY THERAPY SERVICES	119	3	6	19	21	24	12	34
RESPIRATORY THERAPIST	12	1	0	1	2	3	0	5
RESPIRATORY THERAPY TECHNICIAN	107	2	6	18	19	21	12	29
SOCIAL SERVICES AND COUNSELING	174	4	4	11	21	21	33	80
ALCOHOL/DRUG ABUSE SPECIALIST	19	2	3	3	2	0	2	7
CHILD CARE WORKER	4	0	0	0	0	0	0	4
CLINICAL PASTORAL COUNSELOR	142	1	1	6	19	19	28	68
FAMILY COUNSELOR	1	0	0	0	0	0	1	0
HOMEMAKER/HOME HEALTH AIDE	3	0	0	0	0	2	1	0
MEDICAL SOCIAL WORKER	2	0	0	1	0	0	1	0
PSYCHIATRIC SOCIAL WORKER	1	1	0	0	0	0	0	0
REHABILITATION COUNSELOR	1	0	0	0	0	0	0	1
SOCIAL WORK ASSOCIATE	1	0	0	1	0	0	0	0
SPEECH AND HEARING SERVICES	2	0	0	0	0	0	2	0
AUDIOLOGIST	1	0	0	0	0	0	1	0
SPEECH PATHOLOGIST	1	0	0	0	0	0	1	0
VETERINARY SERVICES	1	0	0	0	0	0	0	1
LABORATORY ANIMAL WORKER	1	0	0	0	0	0	0	1

TABLE A-7. GRADUATES OF PROGRAMS BY OCCUPATIONAL TITLE

OCCUPATIONAL TITLE	GRADUATES 1973 PROGRAMS	1973 STUDENTS	1974 PROGRAMS	1974 STUDENTS	1975 PROGRAMS	1975 STUDENTS
ALL OCCUPATIONS	3,508	66,756	3,863	76,755	4,193	79,234
ADMINISTRATION, PLANNING, AND OFFICE	301	4,860	346	5,499	387	5,414
HOSPITAL ASSISTANT ADMINISTRATOR	2	4	2	4	2	4
MEDICAL/DENTAL SECRETARY	0	0	0	0	0	0
UNIT CLERK	284	4,765	327	5,431	367	5,336
UNIT MANAGER	15	91	17	64	18	74
BIOMEDICAL ENGINEERING	0	0	0	0	0	0
BIOMEDICAL ENGINEERING TECHNICIAN	0	0	0	0	0	0
CLINICAL LABORATORY SERVICES	560	3,526	569	3,657	579	3,800
BLOOD BANK TECHNOLOGIST	20	41	19	50	19	51
CHEMISTRY TECHNOLOGIST	1	2	1	3	1	2
CYTOTECHNOLOGIST	43	172	43	192	45	200
ELECTRON MICROSCOPY TECHNICIAN	1	1	1	3	1	5
HEMATOLOGY TECHNOLOGIST	3	15	3	15	3	15
HISTOLOGIC TECHNICIAN	60	128	63	134	61	139
MEDICAL LABORATORY ASSISTANT	53	326	53	305	58	372
MEDICAL LABORATORY TECHNICIAN	20	83	21	89	23	109
MEDICAL TECHNOLOGIST	359	2,758	365	2,866	368	2,907
MICROBIOLOGY TECHNOLOGIST	0	0	0	0	0	0
DENTAL SERVICES	1	10	1	13	1	5
DENTAL ASSISTANT	1	10	1	13	1	5
MAXILLOFACIAL POSTHODONTIA TECH	0	0	0	0	0	0

TABLE A-7. GRADUATES OF PROGRAMS BY OCCUPATIONAL TITLE

OCCUPATIONAL TITLE	GRADUATES 1973 PROGRAMS	1973 STUDENTS	1974 PROGRAMS	1974 STUDENTS	1975 PROGRAMS	1975 STUDENTS
DIETETIC AND NUTRITIONAL SERVICES	85	836	121	1,205	159	1,409
DIETARY AIDE	21	390	24	632	29	691
DIETETIC ASSISTANT	0	0	1	1	3	32
DIETETIC TECHNICIAN	3	13	5	55	5	105
DIETITIAN	60	413	89	486	120	557
NUTRITIONIST	1	20	2	31	2	24
EMERGENCY SERVICES	46	2,098	68	3,941	85	5,659
AMBULANCE ATTENDANT	0	0	1	21	3	43
EMERGENCY MEDICAL TECHNICIAN	46	2,098	67	3,920	82	5,616
INFORMATION AND COMMUNICATION	1	8	2	5	1	4
MEDICAL PHOTOGRAPHER	1	8	2	5	1	4
MED INSTRUMENTATION-MACHINE OPERATION	86	285	108	342	135	462
CARDIOPULMONARY TECHNICIAN	6	35	7	27	9	36
CIRCULATION TECHNOLOGIST	1	1	1	2	2	5
DIALYSIS TECHNICIAN	14	43	21	88	28	109
ELECTROCARDIOGRAPHIC TECHNICIAN	38	132	46	153	55	216
EEG/EKG TECHNICIAN	5	15	6	21	5	16
EEG TECHNOLOGIST/TECHNICIAN	21	58	26	49	34	78
PULMONARY FUNCTION TECHNICIAN	1	1	1	2	2	2
MEDICAL RECORDS	18	134	23	151	28	189
MEDICAL RECORD ADMINISTRATOR	1	15	1	16	1	16
MEDICAL RECORD TECHNICIAN	2	22	1	17	3	22
MEDICAL TRANSCRIPTIONIST	15	97	21	118	24	151

TABLE A-7. GRADUATES OF PROGRAMS BY OCCUPATIONAL TITLE

OCCUPATIONAL TITLE	GRADUATES 1973 PROGRAMS	1973 STUDENTS	1974 PROGRAMS	1974 STUDENTS	1975 PROGRAMS	1975 STUDENTS
MENTAL HEALTH	163	6,845	182	7,600	195	7,746
CLINICAL PSYCHOLOGIST	19	115	19	113	19	109
HUMAN SERVICES TECHNOLOGIST/TECH	1	25	1	30	1	30
MENTAL HEALTH ADMINISTRATOR	2	6	0	0	1	1
MENTAL HEALTH ASSOCIATE/TECH/ASST	10	716	15	856	12	695
MENTAL HEALTH TECHNOLOGIST	8	542	7	447	9	433
MENTAL RETARDATION AIDE	13	1,032	14	1,190	16	1,502
PSYCHIATRIC TECHNICIAN	110	4,409	126	4,964	137	4,976
NUCLEAR MEDICINE	51	221	59	276	65	322
NUC MED TECHNOLOGIST/TECHNICIAN	51	221	59	276	65	322
NURSING AND RELATED SERVICES	1,139	35,342	1,210	39,253	1,257	37,150
GERIATRIC CARE WORKER	0	0	1	37	1	7
LICENSED PRACTICAL NURSE	104	3,112	105	3,122	110	3,156
NURSE AIDE/ORDERLY	537	18,580	595	21,203	628	18,460
NURSE ANESTHETIST	103	546	104	578	106	634
NURSE MIDWIFE	2	21	2	16	1	16
NURSE PRACTITIONER	8	140	14	143	16	135
OBSTETRICAL TECHNICIAN	4	9	5	24	5	20
OPERATING ROOM TECHNICIAN	85	491	88	530	93	587
REGISTERED NURSE	296	12,443	296	13,600	297	14,135
NURSE SPECIALTIES AND OTHER RELATED	358	7,390	430	9,134	512	10,900
CARDIOPULMONARY PERFUSIONIST	0	0	1	2	0	0
CLINICIAN	0	0	0	0	1	5
CORONARY CARE	3	158	3	130	3	130
CORONARY CARE/INTENSIVE CARE	261	6,045	311	7,518	357	8,644

TABLE A-7. GRADUATES OF PROGRAMS BY OCCUPATIONAL TITLE

OCCUPATIONAL TITLE	GRADUATES 1973 PROGRAMS	1973 STUDENTS	1974 PROGRAMS	1974 STUDENTS	1975 PROGRAMS	1975 STUDENTS
DERMATOLOGY	0	0	0	0	1	18
DIABETES	0	0	0	0	0	0
EMERGENCY	0	0	2	47	2	35
ENTERSTOMAL THERAPY	2	46	2	69	3	88
FAMILY NURSE/PHYSICAL ASSESSMENT	1	32	1	20	2	57
GERIATRIC	0	0	1	48	1	27
HEAD NURSE DEVELOPMENT	1	40	2	55	2	98
HEMODIALYSIS/RENAL DIALYSIS	35	129	42	161	50	186
HIGH RISK MATERNITY	0	0	0	0	0	0
INTENSIVE CARE	3	90	3	113	4	146
INTRAVENOUS TECHNICIAN	12	90	18	142	20	216
MONITOR TECHNICIAN	2	24	2	26	2	30
NEONATAL INTENSIVE	3	71	4	106	8	267
NEUROLOGICAL/NEUROSURGICAL	2	47	1	10	4	82
NEWBORN/PEDIATRIC	1	10	1	11	1	17
OBSTETRIC/GYNECOLOGY	1	4	1	3	1	4
ONCOLOGY	0	0	0	0	1	45
PHARMACOLOGY	20	455	23	499	31	581
PSYCHIATRIC	6	96	7	93	7	70
REHABILITATION	1	11	1	13	1	12
RESPIRATORY CARE	1	13	1	12	1	20
SURGICAL	3	29	2	29	6	42
THORACIC/VASCULAR	0	0	0	0	1	43
TRAUMA	0	0	1	27	2	37

TABLE A-7. GRADUATES OF PROGRAMS BY OCCUPATIONAL TITLE

OCCUPATIONAL TITLE	GRADUATES 1973 PROGRAMS	1973 STUDENTS	1974 PROGRAMS	1974 STUDENTS	1975 PROGRAMS	1975 STUDENTS
VISION CARE	5	17	4	13	5	14
OPHTHALMIC ASSISTANT/TECHNICIAN	2	12	2	9	2	9
ORTHOPTIST	3	5	2	4	3	5
PHARMACY SERVICES	42	290	48	291	58	324
MEDICATION PHARMACY TECHNICIAN	4	36	4	55	5	32
PHARMACIST	9	14	9	16	9	17
PHARMACY TECHNICIAN	29	240	35	220	44	275
PHYSICIAN EXTENDER PERSONNEL	3	28	4	46	6	28
PHYSICIAN ASSISTANT-PRIMARY CARE	3	28	4	46	4	23
PHYSICIAN ASSISTANT-SPECIALTY	0	0	0	0	2	5
RADIOLOGICAL SERVICES	449	3,084	457	3,147	461	3,135
RAD THER TECHNOLOGIST/TECHNICIAN	17	42	16	45	19	56
RADIOLOGIC TECHNOLOGIST/TECHNICIAN	432	3,042	441	3,102	442	3,079
ULTRASOUND TECHNICAL SPECIALIST	0	0	0	0	0	0
REHABILITATION-OCCUPATIONAL	2	6	1	4	3	5
OCCUPATIONAL THERAPIST	2	6	1	4	2	4
OCCUPATIONAL THERAPY ASSISTANT	0	0	0	0	1	1
REHABILITATION-PHYSICAL	5	56	6	55	6	66
ORTHOPEDIC TECHNICIAN	1	3	2	7	2	10
ORTHOTIC/PROSTHETIC TECHNICIAN	1	1	0	0	0	0
ORTHOTIST/PROSTHETIST	0	0	0	0	0	0
PHYSICAL THERAPIST	1	35	1	32	1	37
PHYSICAL THERAPY ASSISTANT	2	17	3	16	3	19

TABLE A-7. GRADUATES OF PROGRAMS BY OCCUPATIONAL TITLE

OCCUPATIONAL TITLE	GRADUATES 1973 PROGRAMS	1973 STUDENTS	1974 PROGRAMS	1974 STUDENTS	1975 PROGRAMS	1975 STUDENTS
REHABILITATION-OTHER	3	8	3	7	5	10
ART THERAPIST	1	5	1	3	1	3
MUSIC THERAPIST	0	0	0	0	1	2
RECREATIONAL THERAPIST	2	3	2	4	3	5
RESPIRATORY THERAPY SERVICES	71	443	84	573	96	674
RESPIRATORY THERAPIST	11	101	11	104	11	124
RESPIRATORY THERAPY TECHNICIAN	60	342	73	469	85	550
SOCIAL SERVICES AND COUNSELING	118	1,267	134	1,518	146	1,898
ALCOHOL/DRUG ABUSE SPECIALIST	11	140	14	191	16	274
CHILD CARE WORKER	3	27	3	30	3	120
CLINICAL PASTORAL COUNSELOR	98	1,071	111	1,261	118	1,446
FAMILY COUNSELOR	1	4	1	5	1	6
HOMEMAKER/HOME HEALTH AIDE	1	10	1	12	3	31
MEDICAL SOCIAL WORKER	1	2	1	6	2	7
PSYCHIATRIC SOCIAL WORKER	1	6	1	6	1	6
REHABILITATION COUNSELOR	1	6	1	6	1	6
SOCIAL WORK ASSOCIATE	1	1	1	1	1	2
SPEECH AND HEARING SERVICES	1	2	2	2	2	2
AUDIOLOGIST	0	0	1	1	1	1
SPEECH PATHOLOGIST	1	2	1	1	1	1
VETERINARY SERVICES	0	0	1	23	1	18
LABORATORY ANIMAL WORKER	0	0	1	23	1	18

TABLE A-8. PROJECTED GRADUATES OF PROGRAMS BY OCCUPATIONAL TITLE

OCCUPATIONAL TITLE	PROJECTED GRADUATES 1976 PROGRAMS	1976 STUDENTS	1977 PROGRAMS	1977 STUDENTS	1978 PROGRAMS	1978 STUDENTS
ALL OCCUPATIONS	4,269	81,252	4,045	79,993	3,807	78,263
ADMINISTRATION, PLANNING, AND OFFICE	380	5,467	355	4,901	338	4,899
HOSPITAL ASSISTANT ADMINISTRATOR	2	4	2	4	2	4
MEDICAL/DENTAL SECRETARY	1	6	1	6	1	6
UNIT CLERK	359	5,363	333	4,828	317	4,828
UNIT MANAGER	18	94	19	63	18	61
BIOMEDICAL ENGINEERING	1	1	1	1	1	1
BIOMEDICAL ENGINEERING TECHNICIAN	1	1	1	1	1	1
CLINICAL LABORATORY SERVICES	585	3,990	568	3,965	543	3,992
BLOOD BANK TECHNOLOGIST	19	53	19	51	19	54
CHEMISTRY TECHNOLOGIST	1	2	1	4	1	4
CYTOTECHNOLOGIST	48	207	48	225	45	226
ELECTRON MICROSCOPY TECHNICIAN	1	5	1	8	1	8
HEMATOLOGY TECHNOLOGIST	3	19	3	20	3	21
HISTOLOGIC TECHNICIAN	63	146	57	135	50	135
MEDICAL LABORATORY ASSISTANT	56	368	55	379	49	376
MEDICAL LABORATORY TECHNICIAN	22	113	19	101	19	97
MEDICAL TECHNOLOGIST	371	2,976	364	3,041	355	3,070
MICROBIOLOGY TECHNOLOGIST	1	1	1	1	1	1
DENTAL SERVICES	2	13	2	13	2	14
DENTAL ASSISTANT	1	12	1	12	1	12
MAXILLOFACIAL POSTHODONTIA TECH	1	1	1	1	1	2

TABLE A-8. PROJECTED GRADUATES OF PROGRAMS BY OCCUPATIONAL TITLE

OCCUPATIONAL TITLE	PROJECTED GRADUATES 1976 PROGRAMS	1976 STUDENTS	1977 PROGRAMS	1977 STUDENTS	1978 PROGRAMS	1978 STUDENTS
DIETETIC AND NUTRITIONAL SERVICES	171	1,523	160	1,352	145	1,311
DIETARY AIDE	30	746	30	659	27	634
DIETETIC ASSISTANT	3	63	2	40	2	45
DIETETIC TECHNICIAN	7	94	5	44	4	23
DIETITIAN	129	584	121	585	110	585
NUTRITIONIST	2	36	2	24	2	24
EMERGENCY SERVICES	104	6,495	97	6,164	87	5,584
AMBULANCE ATTENDANT	2	38	2	38	2	38
EMERGENCY MEDICAL TECHNICIAN	102	6,457	95	6,126	85	5,546
INFORMATION AND COMMUNICATION	2	6	2	8	3	10
MEDICAL PHOTOGRAPHER	2	6	2	8	3	10
MED INSTRUMENTATION-MACHINE OPERATION	124	447	119	506	102	525
CARDIOPULMONARY TECHNICIAN	7	23	9	32	6	22
CIRCULATION TECHNOLOGIST	2	3	1	4	2	8
DIALYSIS TECHNICIAN	27	129	25	152	23	172
ELECTROCARDIOGRAPHIC TECHNICIAN	47	190	47	210	42	224
EEG/EKG TECHNICIAN	8	20	8	26	5	23
EEG TECHNOLOGIST/TECHNICIAN	32	80	28	80	23	75
PULMONARY FUNCTION TECHNICIAN	1	2	1	2	1	1
MEDICAL RECORDS	29	175	26	179	21	172
MEDICAL RECORD ADMINISTRATOR	1	16	1	16	1	16
MEDICAL RECORD TECHNICIAN	3	26	4	25	2	22
MEDICAL TRANSCRIPTIONIST	25	133	21	138	18	134

TABLE A-8. PROJECTED GRADUATES OF PROGRAMS BY OCCUPATIONAL TITLE

OCCUPATIONAL TITLE	PROJECTED GRADUATES 1976 PROGRAMS	1976 STUDENTS	1977 PROGRAMS	1977 STUDENTS	1978 PROGRAMS	1978 STUDENTS
MENTAL HEALTH	194	7,867	192	7,637	170	6,445
CLINICAL PSYCHOLOGIST	21	121	20	125	17	99
HUMAN SERVICES TECHNOLOGIST/TECH	1	28	1	28	1	28
MENTAL HEALTH ADMINISTRATOR	2	2	2	2	1	1
MENTAL HEALTH ASSOCIATE/TECH/ASST	15	407	13	394	12	406
MENTAL HEALTH TECHNOLOGIST	6	185	6	139	6	139
MENTAL RETARDATION AIDE	17	2,030	16	1,685	15	1,622
PSYCHIATRIC TECHNICIAN	132	5,094	134	5,264	118	4,150
NUCLEAR MEDICINE	71	388	72	472	66	516
NUC MED TECHNOLOGIST/TECHNICIAN	71	388	72	472	66	516
NURSING AND RELATED SERVICES	1,231	36,042	1,140	35,097	1,084	35,185
GERIATRIC CARE WORKER	1	36	1	35	1	35
LICENSED PRACTICAL NURSE	111	3,304	108	3,417	103	3,310
NURSE AIDE/ORDERLY	607	17,345	540	16,154	510	15,585
NURSE ANESTHETIST	106	641	100	625	101	676
NURSE MIDWIFE	1	14	2	17	1	16
NURSE PRACTITIONER	13	110	16	183	11	111
OBSTETRICAL TECHNICIAN	7	28	7	24	3	9
OPERATING ROOM TECHNICIAN	87	551	77	553	72	529
REGISTERED NURSE	298	14,013	289	14,089	282	14,914
NURSE SPECIALTIES AND OTHER RELATED	543	12,249	491	12,332	459	11,954
CARDIOPULMONARY PERFUSIONIST	1	1	0	0	0	0
CLINICIAN	1	5	0	0	0	0
CORONARY CARE	4	170	3	170	2	120
CORONARY CARE/INTENSIVE CARE	374	9,563	351	9,715	329	9,576

TABLE A-8. PROJECTED GRADUATES OF PROGRAMS BY OCCUPATIONAL TITLE

OCCUPATIONAL TITLE	PROJECTED GRADUATES 1976 PROGRAMS	1976 STUDENTS	1977 PROGRAMS	1977 STUDENTS	1978 PROGRAMS	1978 STUDENTS
DERMATOLOGY	1	20	1	28	1	28
DIABETES	0	0	1	1	1	1
EMERGENCY	3	71	1	5	2	15
ENTERSTOMAL THERAPY	4	95	3	84	3	80
FAMILY NURSE/PHYSICAL ASSESSMENT	2	51	2	85	2	85
GERIATRIC	1	40	1	40	1	40
HEAD NURSE DEVELOPMENT	2	44	2	60	2	60
HEMODIALYSIS/RENAL DIALYSIS	53	243	44	217	41	201
HIGH RISK MATERNITY	1	24	1	45	1	45
INTENSIVE CARE	4	188	4	190	3	130
INTRAVENOUS TECHNICIAN	20	306	14	275	13	276
MONITOR TECHNICIAN	2	18	2	20	2	20
NEONATAL INTENSIVE	9	285	9	319	8	279
NEUROLOGICAL/NEUROSURGICAL	2	52	1	12	1	12
NEWBORN/PEDIATRIC	1	10	1	10	1	10
OBSTETRIC/GYNECOLOGY	2	7	2	9	2	9
ONCOLOGY	4	142	4	174	3	114
PHARMACOLOGY	31	679	24	595	22	564
PSYCHIATRIC	8	89	7	112	7	121
REHABILITATION	1	7	1	16	1	16
RESPIRATORY CARE	2	45	2	40	2	40
SURGICAL	8	55	8	68	7	70
THORACIC/VASCULAR	1	9	1	12	1	12
TRAUMA	1	30	1	30	1	30

TABLE A-8. PROJECTED GRADUATES OF PROGRAMS BY OCCUPATIONAL TITLE

OCCUPATIONAL TITLE	PROJECTED GRADUATES 1976 PROGRAMS	1976 STUDENTS	1977 PROGRAMS	1977 STUDENTS	1978 PROGRAMS	1978 STUDENTS
VISION CARE	5	16	4	11	3	10
OPHTHALMIC ASSISTANT/TECHNICIAN	2	12	1	4	1	5
ORTHOPTIST	3	4	3	7	2	5
PHARMACY SERVICES	60	418	62	435	53	409
MEDICATION PHARMACY TECHNICIAN	5	71	3	60	3	60
PHARMACIST	8	16	9	16	9	16
PHARMACY TECHNICIAN	47	331	50	359	41	333
PHYSICIAN EXTENDER PERSONNEL	7	57	6	56	4	41
PHYSICIAN ASSISTANT-PRIMARY CARE	5	53	5	52	3	39
PHYSICIAN ASSISTANT-SPECIALTY	2	4	1	4	1	2
RADIOLOGICAL SERVICES	471	3,137	475	3,410	464	3,783
RAD THER TECHNOLOGIST/TECHNICIAN	25	75	26	88	25	94
RADIOLOGIC TECHNOLOGIST/TECHNICIAN	444	3,060	446	3,318	437	3,686
ULTRASOUND TECHNICAL SPECIALIST	2	2	3	4	2	3
REHABILITATION-OCCUPATIONAL	3	8	3	9	3	10
OCCUPATIONAL THERAPIST	2	6	2	7	2	8
OCCUPATIONAL THERAPY ASSISTANT	1	2	1	2	1	2
REHABILITATION-PHYSICAL	7	53	8	62	7	63
ORTHOPEDIC TECHNICIAN	1	5	1	5	2	8
ORTHOTIC/PROSTHETIC TECHNICIAN	1	3	2	2	0	0
ORTHOTIST/PROSTHETIST	1	3	1	2	1	2
PHYSICAL THERAPIST	1	21	1	35	1	35
PHYSICAL THERAPY ASSISTANT	3	21	3	18	3	18

TABLE A-8. PROJECTED GRADUATES OF PROGRAMS BY OCCUPATIONAL TITLE

OCCUPATIONAL TITLE	PROJECTED GRADUATES 1976 PROGRAMS	1976 STUDENTS	1977 PROGRAMS	1977 STUDENTS	1978 PROGRAMS	1978 STUDENTS
REHABILITATION-OTHER	5	17	3	16	3	16
ART THERAPIST	1	2	1	2	1	2
MUSIC THERAPIST	1	9	1	12	1	12
RECREATIONAL THERAPIST	3	6	1	2	1	2
RESPIRATORY THERAPY SERVICES	105	785	96	898	88	915
RESPIRATORY THERAPIST	12	151	12	148	10	161
RESPIRATORY THERAPY TECHNICIAN	93	634	84	750	78	754
SOCIAL SERVICES AND COUNSELING	166	2,164	160	2,434	158	2,363
ALCOHOL/DRUG ABUSE SPECIALIST	17	248	17	261	14	196
CHILD CARE WORKER	4	164	4	281	4	146
CLINICAL PASTORAL COUNSELOR	136	1,661	131	1,825	133	1,962
FAMILY COUNSELOR	1	6	1	8	1	10
HOMEMAKER/HOME HEALTH AIDE	3	52	2	30	1	20
MEDICAL SOCIAL WORKER	2	21	2	16	2	16
PSYCHIATRIC SOCIAL WORKER	1	5	1	6	1	6
REHABILITATION COUNSELOR	1	6	1	6	1	6
SOCIAL WORK ASSOCIATE	1	1	1	1	1	1
SPEECH AND HEARING SERVICES	2	4	2	5	2	5
AUDIOLOGIST	1	1	1	1	1	1
SPEECH PATHOLOGIST	1	3	1	4	1	4
VETERINARY SERVICES	1	30	1	30	1	40
LABORATORY ANIMAL WORKER	1	30	1	30	1	40

TABLE A-9. GRADUATES OF PROGRAMS BY REGION AND NUMBER OF BEDS

NUMBER OF BEDS	GRADUATES 1973 PROGRAMS	1973 STUDENTS	1974 PROGRAMS	1974 STUDENTS	1975 PROGRAMS	1975 STUDENTS
TOTAL: ALL BED-SIZES	3,508	66,756	3,863	76,755	4,193	79,234
6- 49	42	441	48	830	61	1,007
50- 99	112	1,160	134	1,482	167	1,963
100-199	423	5,487	496	7,066	526	7,189
200-299	637	9,217	677	10,719	744	10,840
300-399	585	9,545	630	11,048	695	11,823
400-499	497	9,333	549	10,514	581	10,543
500 OR MORE	1,212	31,573	1,329	35,096	1,419	35,869
NEW ENGLAND	271	4,786	293	5,399	311	5,827
6- 49	2	9	3	37	4	47
50- 99	6	57	8	78	7	82
100-199	41	646	45	776	48	755
200-299	56	828	57	936	60	1,036
300-399	61	1,118	64	1,178	68	1,305
400-499	28	535	32	647	33	694
500 OR MORE	77	1,593	84	1,747	91	1,908
MIDDLE ATLANTIC	724	14,479	771	16,156	817	16,306
6- 49	3	81	3	48	2	33
50- 99	10	203	10	231	13	249
100-199	79	910	87	1,226	93	1,222
200-299	126	2,269	128	2,309	135	2,279
300-399	141	2,324	153	2,840	166	2,785
400-499	87	1,685	91	1,967	95	1,744
500 OR MORE	278	7,007	299	7,535	313	7,994

TABLE A-9. GRADUATES OF PROGRAMS BY REGION AND NUMBER OF BEDS

NUMBER OF BEDS	GRADUATES 1973 PROGRAMS	1973 STUDENTS	1974 PROGRAMS	1974 STUDENTS	1975 PROGRAMS	1975 STUDENTS
SOUTH ATLANTIC	468	7,998	520	9,181	560	9,199
6- 49	2	42	4	57	3	83
50- 99	12	116	15	158	18	190
100-199	53	551	61	644	58	632
200-299	65	727	70	906	79	819
300-399	92	1,434	98	1,740	108	1,832
400-499	71	883	79	1,001	86	1,051
500 OR MORE	173	4,245	193	4,675	208	4,592
EAST NORTH CENTRAL	943	19,799	1,027	22,212	1,095	22,544
6- 49	3	20	4	36	5	76
50- 99	24	213	35	290	40	392
100-199	98	1,502	103	1,741	109	1,602
200-299	192	3,005	196	3,415	212	3,489
300-399	120	1,951	133	2,401	149	2,683
400-499	181	3,793	199	4,060	199	3,912
500 OR MORE	325	9,315	357	10,269	381	10,390
EAST SOUTH CENTRAL	158	3,286	191	3,698	205	3,757
6- 49	3	47	3	34	4	62
50- 99	3	51	3	110	6	89
100-199	20	328	32	559	33	531
200-299	35	504	37	469	37	500
300-399	20	442	25	448	25	477
400-499	33	479	38	459	43	550
500 OR MORE	44	1,435	53	1,619	57	1,548

TABLE A-9. GRADUATES OF PROGRAMS BY REGION AND NUMBER OF BEDS

NUMBER OF BEDS	GRADUATES					
	1973		1974		1975	
	PROGRAMS	STUDENTS	PROGRAMS	STUDENTS	PROGRAMS	STUDENTS
WEST NORTH CENTRAL	368	7,370	401	9,034	452	9,614
6- 49	6	71	7	443	11	452
50- 99	21	162	25	215	31	351
100-199	41	561	50	790	59	968
200-299	40	496	46	844	52	795
300-399	69	1,060	69	1,126	76	1,165
400-499	38	1,032	39	1,248	46	1,322
500 OR MORE	153	3,988	165	4,368	177	4,561
WEST SOUTH CENTRAL	214	3,591	247	4,920	288	5,033
6- 49	11	68	12	69	16	119
50- 99	22	251	24	288	27	326
100-199	35	541	46	820	53	760
200-299	30	439	35	679	43	695
300-399	20	286	23	340	27	422
400-499	20	244	26	383	31	402
500 OR MORE	76	1,762	81	2,341	91	2,309
MOUNTAIN	112	1,942	134	2,230	155	2,635
6- 49	8	74	8	63	12	96
50- 99	7	62	7	75	9	158
100-199	27	254	35	334	36	442
200-299	22	271	32	398	41	445
300-399	21	295	21	294	24	344
400-499	7	204	8	206	9	227
500 OR MORE	20	782	23	860	24	923

TABLE A-9. GRADUATES OF PROGRAMS BY REGION AND NUMBER OF BEDS

NUMBER OF BEDS	GRADUATES					
	1973		1974		1975	
	PROGRAMS	STUDENTS	PROGRAMS	STUDENTS	PROGRAMS	STUDENTS
PACIFIC	243	3,352	272	3,818	303	4,225
6- 49	4	29	4	43	4	39
50- 99	7	45	7	37	16	126
100-199	28	163	36	166	36	265
200-299	69	656	76	763	85	782
300-399	39	609	41	645	49	779
400-499	32	478	37	543	39	641
500 OR MORE	64	1,372	71	1,621	74	1,593
ASSOCIATED AREAS	7	153	7	107	7	94
6- 49	0	0	0	0	0	0
50- 99	0	0	0	0	0	0
100-199	1	31	1	10	1	12
200-299	2	22	0	0	0	0
300-399	2	26	3	36	3	31
400-499	0	0	0	0	0	0
500 OR MORE	2	74	3	61	3	51

TABLE A-10. PROJECTED GRADUATES OF PROGRAMS BY REGION AND NUMBER OF BEDS

NUMBER OF BEDS	PROJECTED GRADUATES 1976 PROGRAMS	1976 STUDENTS	1977 PROGRAMS	1977 STUDENTS	1978 PROGRAMS	1978 STUDENTS
TOTAL: ALL BED-SIZES	4,269	81,252	4,045	79,993	3,807	78,263
6- 49	62	1,127	61	1,039	52	770
50- 99	176	2,060	153	1,924	144	1,831
100-199	558	7,404	536	7,503	495	7,431
200-299	751	11,682	719	12,099	678	11,348
300-399	697	12,596	646	12,006	603	12,160
400-499	592	11,402	569	11,056	535	10,799
500 OR MORE	1,433	34,981	1,361	34,366	1,300	33,924
NEW ENGLAND	324	6,099	309	6,152	285	5,899
6- 49	4	44	4	35	3	15
50- 99	10	128	10	109	9	119
100-199	48	731	47	770	42	716
200-299	61	1,129	58	1,216	55	1,151
300-399	72	1,306	64	1,194	61	1,236
400-499	38	797	36	838	35	845
500 OR MORE	91	1,964	90	1,990	80	1,817
MIDDLE ATLANTIC	811	16,709	771	15,818	697	14,902
6- 49	3	45	2	30	2	35
50- 99	15	243	13	216	11	168
100-199	95	1,356	89	1,208	78	1,162
200-299	139	2,287	127	2,305	115	2,114
300-399	160	3,130	152	2,764	135	2,760
400-499	91	1,734	92	1,663	81	1,601
500 OR MORE	308	7,914	296	7,632	275	7,062

TABLE A-10. PROJECTED GRADUATES OF PROGRAMS BY REGION AND NUMBER OF BEDS

NUMBER OF BEDS	PROJECTED GRADUATES					
	1976		1977		1978	
	PROGRAMS	STUDENTS	PROGRAMS	STUDENTS	PROGRAMS	STUDENTS
SOUTH ATLANTIC	579	9,739	526	9,321	497	9,360
6- 49	4	80	3	78	4	104
50- 99	19	229	15	212	16	197
100-199	62	645	60	658	55	662
200-299	87	924	75	878	69	871
300-399	108	1,728	97	1,683	92	1,644
400-499	89	1,250	76	1,227	76	1,253
500 OR MORE	210	4,883	200	4,585	185	4,629
EAST NORTH CENTRAL	1,100	22,639	1,058	22,637	998	22,005
6- 49	3	38	4	71	2	22
50- 99	43	466	40	408	38	406
100-199	110	1,540	106	1,553	100	1,544
200-299	204	4,134	205	4,242	191	3,667
300-399	147	2,613	138	2,468	126	2,482
400-499	207	4,421	202	4,198	187	3,979
500 OR MORE	386	9,427	363	9,697	354	9,905
EAST SOUTH CENTRAL	218	3,697	201	3,715	189	3,696
6- 49	5	50	5	57	4	56
50- 99	5	83	5	95	4	110
100-199	41	659	38	664	37	691
200-299	40	417	36	420	36	457
300-399	26	502	22	523	21	539
400-499	40	545	42	562	37	537
500 OR MORE	61	1,441	53	1,394	50	1,306

TABLE A-10. PROJECTED GRADUATES OF PROGRAMS BY REGION AND NUMBER OF BEDS

NUMBER OF BEDS	PROJECTED GRADUATES 1976 PROGRAMS	1976 STUDENTS	1977 PROGRAMS	1977 STUDENTS	1978 PROGRAMS	1978 STUDENTS
WEST NORTH CENTRAL	466	9,932	439	9,576	433	9,625
6- 49	12	421	11	321	10	122
50- 99	32	295	25	283	24	271
100-199	61	871	58	916	55	952
200-299	52	847	49	845	48	852
300-399	79	1,325	74	1,301	72	1,362
400-499	44	1,244	44	1,140	44	1,133
500 OR MORE	186	4,929	178	4,770	180	4,933
WEST SOUTH CENTRAL	293	5,072	282	5,380	271	5,384
6- 49	16	99	16	107	15	108
50- 99	24	325	23	339	23	373
100-199	61	895	60	944	56	974
200-299	42	670	42	865	41	847
300-399	30	461	26	429	27	451
400-499	33	409	27	349	26	341
500 OR MORE	87	2,213	88	2,347	83	2,290
MOUNTAIN	156	2,354	153	2,314	144	2,276
6- 49	9	79	10	84	8	80
50- 99	9	110	8	113	8	118
100-199	38	346	40	416	33	352
200-299	42	445	41	476	41	501
300-399	23	360	23	396	23	404
400-499	9	269	9	260	9	252
500 OR MORE	26	745	22	569	22	569

TABLE A-10. PROJECTED GRADUATES OF PROGRAMS BY REGION AND NUMBER OF BEDS

NUMBER OF BEDS	PROJECTED GRADUATES					
	1976		1977		1978	
	PROGRAMS	STUDENTS	PROGRAMS	STUDENTS	PROGRAMS	STUDENTS
PACIFIC	315	4,901	300	5,003	288	5,043
6- 49	6	271	6	256	4	228
50- 99	19	181	14	149	11	69
100-199	41	351	38	374	39	378
200-299	82	805	84	835	80	871
300-399	50	1,136	48	1,234	45	1,272
400-499	41	733	41	819	40	858
500 OR MORE	76	1,424	69	1,336	69	1,367
ASSOCIATED AREAS	7	110	6	77	5	73
6- 49	0	0	0	0	0	0
50- 99	0	0	0	0	0	0
100-199	1	10	0	0	0	0
200-299	2	24	2	17	2	17
300-399	2	35	2	14	1	10
400-499	0	0	0	0	0	0
500 OR MORE	2	41	2	46	2	46

Table B-1

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS
Nurse Aide/Orderly
726 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	726	100.0
Program is accredited	0	0.0
Program is not accredited	726	100.0
Award		
Programs reporting	726	100.0
Award conferred	471	64.9
Award not conferred	255	35.1
Frequency of Conducting Programs		
Programs reporting	726	100.0
No regular schedule	578	79.6
Once a year	35	4.8
More than once a year	96	13.2
Other schedule	17	2.3
Program Requirements		
Admission Restricted		
Programs reporting	726	100.0
Admission restricted to employees	466	64.2
Admission not restricted	260	35.8
Program Prerequisites		
Programs reporting	726	100.0
Program prerequisites required	488	67.2
No program prerequisites required	238	32.8
Educational Level and/or Health Training Required		
Programs reporting	488	100.0
Some high school	120	24.6
High school graduate	298	61.1
Less than 2 years of college	0	0.0
2 years of college	0	0.0
Associate degree	0	0.0
3 years of college	0	0.0
4 years of college	0	0.0
Bachelor's degree	0	0.0
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	24	4.9
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B-1/ Nurse Aide/Orderly

Program Characteristics	Number	Percent
Registered Nurse preparation	0	0.0
LPN (LVN) training	0	0.0
Nursing Aide training	90	18.4
Other specific health training	2	0.4
Total Prerequisites reported	534	
Program Finances		
Tuition Charge		
Programs reporting	726	100.0
Tuition	55	7.6
No tuition	671	92.4
Veterans Administration Approval		
Programs reporting	721	100.0
Approval	13	1.8
No approval	708	98.2

Table B-2

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS

Nurse Aide/Orderly
726 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976.....	186	11.457
Graduates		
1973.....	537	34.600
1974.....	595	35.635
1975.....	628	29.395
Expected Graduates		
1976.....	607	28.575
1977.....	540	29.915
1978.....	510	30.559
Hours of Instruction		
Total hours of instruction.....	726	243.207

Table B-3

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Radiologic Technologist/Technician
461 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	461	100.0
Program is accredited	458	99.3
Program is not accredited	3	0.7
Award		
Programs reporting	461	100.0
Award conferred	456	98.9
Award not conferred	5	1.1
Frequency of Conducting Programs		
Programs reporting	461	100.0
No regular schedule	7	1.5
Once a year	430	93.3
More than once a year	21	4.6
Other schedule	3	0.7
Program Requirements		
Admission Restricted		
Programs reporting	461	100.0
Admission restricted to employees	2	0.4
Admission not restricted	459	99.6
Program Prerequisites		
Programs reporting	461	100.0
Program prerequisites required	459	99.6
No program prerequisites required	2	0.4
Educational Level and/or Health Training Required		
Programs reporting	459	100.0
Some high school	0	0.0
High school graduate	453	98.7
Less than 2 years of college	4	0.9
2 years of college	2	0.4
Associate degree	0	0.0
3 years of college	0	0.0
4 years of college	0	0.0
Bachelor's degree	0	0.0
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	0	0.0
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B-3/ Radiologic Technologist/Technician

Program Characteristics	Number	Percent
Registered Nurse preparation	0	0.0
LPN (LVN) training	0	0.0
Nursing Aide training	0	0.0
Other specific health training	0	0.0
Total Prerequisites reported	459	
Program Finances		
Tuition Charge		
Programs reporting	461	100.0
Tuition	271	58.8
No tuition	190	41.2
Veterans Administration Approval		
Programs reporting	457	100.0
Approval	381	83.4
No approval	76	16.6

Table B-4

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS

Radiologic Technologist/Technician
461 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976	456	13.789
Graduates		
1973	432	7.042
1974	441	7.034
1975	442	6.966
Expected Graduates		
1976	444	6.892
1977	446	7.439
1978	437	8.435
Hours of Instruction		
Total hours of instruction	461	3936.464

Table B-5

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Unit Clerk
423 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	423	100.0
Program is accredited	0	0.0
Program is not accredited	423	100.0
Award		
Programs reporting	423	100.0
Award conferred	163	38.5
Award not conferred	260	61.5
Frequency of Conducting Programs		
Programs reporting	423	100.0
No regular schedule	371	87.7
Once a year	4	0.9
More than once a year	41	9.7
Other schedule	7	1.7
Program Requirements		
Admission Restricted		
Programs reporting	423	100.0
Admission restricted to employees	282	66.7
Admission not restricted	141	33.3
Program Prerequisites		
Programs reporting	423	100.0
Program prerequisites required	370	87.5
No program prerequisites required	53	12.5
Educational Level and/or Health Training Required		
Programs reporting	370	100.0
Some high school	18	4.9
High school graduate	339	91.6
Less than 2 years of college	5	1.4
2 years of college	0	0.0
Associate degree	0	0.0
3 years of college	0	0.0
4 years of college	0	0.0
Bachelor's degree	0	0.0
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	3	0.8
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Program Characteristics	Number	Percent
Registered Nurse preparation	0	0.0
LPN (LVN) training	0	0.0
Nursing Aide training	15	4.1
Other specific health training	3	0.8
Total Prerequisites reported	388	
Program Finances		
Tuition Charge		
Programs reporting	423	100.0
Tuition	9	2.1
No tuition	414	97.9
Veterans Administration Approval		
Programs reporting	419	100.0
Approval	2	0.5
No approval	417	99.5

Table B-6

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS

Unit Clerk

423 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976.....	112	6.473
Graduates		
1973.....	284	16.778
1974.....	327	16.609
1975.....	367	14.540
Expected Graduates		
1976.....	359	14.939
1977.....	333	14.498
1978.....	316	15.278
Hours of Instruction		
Total hours of instruction.....	422	247.097

Table B-7

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Coronary Care/Intensive Care
412 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	412	100.0
Program is accredited	0	0.0
Program is not accredited	412	100.0
Award		
Programs reporting	411	100.0
Award conferred	338	82.2
Award not conferred	73	17.8
Frequency of Conducting Programs		
Programs reporting	412	100.0
No regular schedule	193	46.8
Once a year	62	15.0
More than once a year	151	36.7
Other schedule	6	1.5
Program Requirements		
Admission Restricted		
Programs reporting	412	100.0
Admission restricted to employees	241	58.5
Admission not restricted	171	41.5
Program Prerequisites		
Programs reporting	412	100.0
Program prerequisites required	411	99.8
No program prerequisites required	1	0.2
Educational Level and/or Health Training Required		
Programs reporting	411	100.0
Some high school	0	0.0
High school graduate	68	16.5
Less than 2 years of college	11	2.8
2 years of college	7	1.7
Associate degree	66	16.1
3 years of college	3	0.7
4 years of college	0	0.0
Bachelor's degree	2	0.5
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	0	0.0
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B-7, Nurse Specialty-Coronary Care/Intensive Care

Program Characteristics	Number	Percent
Registered Nurse preparation	410	99.8
LPN (LVN) training	162	39.4
Nursing Aide training	0	0.0
Other specific health training	7	1.7
Total Prerequisites reported	736	
Program Finances		
Tuition Charge		
Programs reporting	411	100.0
Tuition	80	19.5
No tuition	331	80.5
Veterans Administration Approval		
Programs reporting	404	100.0
Approval	3	0.7
No approval	401	99.3

Table B-8

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS

Coronary Care/Intensive Care
412 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976	139	16,835
Graduates		
1973	261	23.161
1974	311	24.174
1975	357	24.213
Expected Graduates		
1976	374	25.570
1977	351	27.678
1978	329	29.106
Hours of Instruction		
Total hours of instruction	412	186.294

Table B-9

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Medical Technologist
376 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	376	100.0
Program is accredited	350	93.1
Program is not accredited	26	6.9
Award		
Programs reporting	376	100.0
Award conferred	361	96.0
Award not conferred	15	4.0
Frequency of Conducting Programs		
Programs reporting	376	100.0
No regular schedule	2	0.5
Once a year	290	77.1
More than once a year	83	22.1
Other schedule	1	0.3
Program Requirements		
Admission Restricted		
Programs reporting	376	100.0
Admission restricted to employees	0	0.0
Admission not restricted	376	100.0
Program Prerequisites		
Programs reporting	376	100.0
Program prerequisites required	376	100.0
No program prerequisites required	0	0.0
Educational Level and/or Health Training Required		
Programs reporting	376	100.0
Some high school	0	0.0
High school graduate	0	0.0
Less than 2 years of college	0	0.0
2 years of college	1	0.3
Associate degree	0	0.0
3 years of college	293	77.9
4 years of college	2	0.5
Bachelor's degree	80	21.3
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	0	0.0
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B-9, Medical Technologist

Program Characteristics	Number	Percent
Registered Nurse preparation	0	0.0
LPN (LVN) training	0	0.0
Nursing Aide training	0	0.0
Other specific health training	0	0.0
Total Prerequisites reported	376	
Program Finances		
Tuition Charge		
Programs reporting	375	100.0
Tuition	71	18.9
No tuition	304	81.1
Veterans Administration Approval		
Programs reporting	371	100.0
Approval	228	61.5
No approval	143	38.5

Table B-10

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS

Medical Technologist
376 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976.....	361	7.942
Graduates		
1973.....	359	7.682
1974.....	365	7.852
1975.....	368	7.899
Expected Graduates		
1976.....	371	8.022
1977.....	364	8.354
1978.....	355	8.648
Hours of Instruction		
Total hours of instruction.....	376	2016.771

Table B-11

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS
Registered Nurse
298 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	298	100.0
Program is accredited	276	92.6
Program is not accredited	22	7.4
Award		
Programs reporting	298	100.0
Award conferred	298	100.0
Award not conferred	0	0.0
Frequency of Conducting Programs		
Programs reporting	298	100.0
No regular schedule	1	0.3
Once a year	289	97.0
More than once a year	7	2.3
Other schedule	1	0.3
Program Requirements		
Admission Restricted		
Programs reporting	298	100.0
Admission restricted to employees	0	0.0
Admission not restricted	298	100.0
Program Prerequisites		
Programs reporting	298	100.0
Program prerequisites required	295	99.0
No program prerequisites required	3	1.0
Educational Level and/or Health Training Required		
Programs reporting	295	100.0
Some high school	1	0.3
High school graduate	286	96.9
Less than 2 years of college	7	2.4
2 years of college	0	0.0
Associate degree	1	0.3
3 years of college	0	0.0
4 years of college	0	0.0
Bachelor's degree	0	0.0
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	0	0.0
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B-11, Registered Nurse

Program Characteristics	Number	Percent
Registered Nurse preparation	0	0.0
LPN (LVN) training	1	0.3
Nursing Aide training	1	0.3
Other specific health training	1	0.3
Total Prerequisites reported	298	
Program Finances		
Tuition Charge		
Programs reporting	298	100.0
Tuition	291	97.7
No tuition	7	2.3
Veterans Administration Approval		
Programs reporting	297	100.0
Approval	285	96.0
No approval	12	4.0

Table B-12

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS

Registered Nurse
298 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976	296	137.490
Graduates		
1973	296	42.037
1974	296	45.946
1975	297	47.593
Expected Graduates		
1976	298	47.023
1977	289	48.751
1978	282	52.887
Hours of Instruction		
Total hours of instruction	298	3207.742

Table B-13

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Psychiatric Technician
165 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	165	100.0
Program is accredited	0	0.0
Program is not accredited	165	100.0
Award		
Programs reporting	165	100.0
Award conferred	115	69.7
Award not conferred	50	30.3
Frequency of Conducting Programs		
Programs reporting	165	100.0
No regular schedule	104	64.0
Once a year	7	4.2
More than once a year	41	24.8
Other schedule	13	7.9
Program Requirements		
Admission Restricted		
Programs reporting	165	100.0
Admission restricted to employees	144	87.3
Admission not restricted	21	12.7
Program Prerequisites		
Programs reporting	165	100.0
Program prerequisites required	120	72.7
No program prerequisites required	45	27.3
Educational Level and/or Health Training Required		
Programs reporting	120	100.0
Some high school	17	14.2
High school graduate	59	49.2
Less than 2 years of college	1	0.8
2 years of college	3	2.5
Associate degree	0	0.0
3 years of college	0	0.0
4 years of college	0	0.0
Bachelor's degree	1	0.8
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	12	10.0
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B-13, Psychiatric Technician

Program Characteristics	Number	Percent
Registered Nurse preparation	0	0.0
LPN (LVN) training	0	0.0
Nursing Aide training	22	18.3
Other specific health training	44	36.7
Total Prerequisites reported	159	
Program Finances		
Tuition Charge		
Programs reporting	165	100.0
Tuition	1	0.6
No tuition	164	99.4
Veterans Administration Approval		
Programs reporting	158	100.0
Approval	18	11.4
No approval	140	88.6

Table B-14

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS
Psychiatric Technician
165 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976	78	13.667
Graduates		
1973	110	40.082
1974	126	39.397
1975	137	36.321
Expected Graduates		
1976	132	38.591
1977	134	39.284
1978	118	35.169
Hours of Instruction		
Total hours of instruction	165	510.545

Table B-15

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Dietitian

146 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	146	100.0
Program is accredited	141	96.6
Program is not accredited	5	3.4
Award		
Programs reporting	146	100.0
Award conferred	85	58.2
Award not conferred	61	41.8
Frequency of Conducting Programs		
Programs reporting	146	100.0
No regular schedule	26	17.8
Once a year	100	68.5
More than once a year	16	11.0
Other schedule	4	2.7
Program Requirements		
Admission Restricted		
Programs reporting	146	100.0
Admission restricted to employees	13	8.9
Admission not restricted	133	91.1
Program Prerequisites		
Programs reporting	146	100.0
Program prerequisites required	146	100.0
No program prerequisites required	0	0.0
Educational Level and/or Health Training Required		
Programs reporting	146	100.0
Some high school	0	0.0
High school graduate	0	0.0
Less than 2 years of college	0	0.0
2 years of college	0	0.0
Associate degree	0	0.0
3 years of college	0	0.0
4 years of college	0	0.0
Bachelor's degree	143	97.9
Master's degree	3	2.1
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	0	0.0
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B-15, Dietitian

Program Characteristics	Number	Percent
Registered Nurse preparation	0	0.0
LPN (LVN) training	0	0.0
Nursing Aide training	0	0.0
Other specific health training	0	0.0
Total Prerequisites reported	146	
Program Finances		
Tuition Charge		
Programs reporting	146	100.0
Tuition	32	21.9
No tuition	114	78.1
Veterans' Administration Approval		
Programs reporting	142	100.0
Approval	9	6.3
No approval	133	93.7

Table B-16

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS

Dietitian
146 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976	118	4.534
Graduates		
1973	60	6.883
1974	89	5.461
1975	120	4.642
Expected Graduates		
1976	129	4.527
1977	121	4.835
1978	110	5.318
Hours of Instruction		
Total hours of instruction	146	1854.493

Table B-17

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Clinical Pastoral Counselor
142 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	142	100.0
Program is accredited	135	95.1
Program is not accredited	7	4.9
Award		
Programs reporting	142	100.0
Award conferred	124	87.3
Award not conferred	18	12.7
Frequency of Conducting Programs		
Programs reporting	142	100.0
No regular schedule	6	4.2
Once a year	43	30.3
More than once a year	90	63.4
Other schedule	3	2.1
Program Requirements		
Admission Restricted		
Programs reporting	141	100.0
Admission restricted to employees	1	0.7
Admission not restricted	140	99.3
Program Prerequisites		
Programs reporting	142	100.0
Program prerequisites required	142	100.0
No program prerequisites required	0	0.0
Educational Level and/or Health Training Required		
Programs reporting	142	100.0
Some high school	0	0.0
High school graduate	0	0.0
Less than 2 years of college	0	0.0
2 years of college	0	0.0
Associate degree	0	0.0
3 years of college	0	0.0
4 years of college	0	0.0
Bachelor's degree	19	13.4
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	121	85.2
Other academic education	3	2.1
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B17. Clinical Pastoral Counselor

Program Characteristics	Number	Percent
Registered Nurse preparation	0	0.0
LPN (LVN) training	0	0.0
Nursing Aide training	0	0.0
Other specific health training	11	7.7
Total Prerequisites reported	154	
Program Finances		
Tuition Charge		
Programs reporting	142	100.0
Tuition	116	81.7
No tuition	26	18.3
Veterans Administration Approval		
Programs reporting	142	100.0
Approval	66	46.5
No approval	76	53.5

Table B-18

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS

Clinical Pastoral Counselor
142 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976	101	6.208
Graduates		
1973	98	10.929
1974	111	11.360
1975	118	12.254
Expected Graduates		
1976	136	12.213
1977	131	13.931
1978	133	14.752
Hours of Instruction		
Total hours of instruction	142	725.514

Table B-19

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Operating Room Technician
139 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	139	100.0
Program is accredited	28	20.1
Program is not accredited	111	79.9
Award		
Programs reporting	139	100.0
Award conferred	89	64.0
Award not conferred	50	36.0
Frequency of Conducting Programs		
Programs reporting	139	100.0
No regular schedule	84	60.4
Once a year	43	30.9
More than once a year	8	5.8
Other schedule	4	2.9
Program Requirements		
Admission Restricted		
Programs reporting	139	100.0
Admission restricted to employees	60	43.2
Admission not restricted	79	56.8
Program Prerequisites		
Programs reporting	139	100.0
Program prerequisites required	129	92.8
No program prerequisites required	10	7.2
Educational Level and/or Health Training Required		
Programs reporting	129	100.0
Some high school	4	3.1
High school graduate	118	91.5
Less than 2 years of college	1	0.8
2 years of college	0	0.0
Associate degree	0	0.0
3 years of college	0	0.0
4 years of college	0	0.0
Bachelor's degree	0	0.0
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	1	0.6
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B-19, Operating Room Technician

Program Characteristics	Number	Percent
Registered Nurse preparation	0	0.0
LPN (LVN) training	20	15.5
Nursing Aide training	18	14.0
Other specific health training	1	0.8
Total Prerequisites reported	163	
Program Finances		
Tuition Charge		
Programs reporting	139	100.0
Tuition	19	13.7
No tuition	120	86.3
Veterans Administration Approval		
Programs reporting	138	100.0
Approval	11	8.0
No approval	127	92.0

Table B-20

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS

Operating Room Technician
139 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976	64	6.891
Graduates		
1973	85	5.776
1974	88	6.023
1975	93	6.312
Expected Graduates		
1976	87	6.333
1977	77	7.182
1978	72	7.347
Hours of Instruction		
Total hours of instruction	139	1183.813

Table B-21

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Nurse Anesthetist
116 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	116	100.0
Program is accredited	116	100.0
Program is not accredited	0	0.0
Award		
Programs reporting	116	100.0
Award conferred	116	100.0
Award not conferred	0	0.0
Frequency of Conducting Programs		
Programs reporting	116	100.0
No regular schedule	2	1.7
Once a year	78	67.2
More than once a year	27	23.3
Other schedule	9	7.8
Program Requirements		
Admission Restricted		
Programs reporting	116	100.0
Admission restricted to employees	0	0
Admission not restricted	116	100.0
Program Prerequisites		
Programs reporting	116	100.0
Program prerequisites required	116	100.0
No program prerequisites required	0	0.0
Educational Level and/or Health Training Required		
Programs reporting	116	100.0
Some high school	0	0.0
High school graduate	30	25.9
Less than 2 years of college	0	0.0
2 years of college	0	0.0
Associate degree	16	13.8
3 years of college	1	0.9
4 years of college	0	0.0
Bachelor's degree	5	4.3
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	0	0.0
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B-21, Nurse Anesthetist

Program Characteristics	Number	Percent
Registered Nurse preparation	115	99.1
LPN (LVN) training	0	0.0
Nursing Aide training	0	0.0
Other specific health training	4	3.4
Total Prerequisites reported	171	
Program Finances		
Tuition Charge		
Programs reporting	116	100.0
Tuition	55	47.4
No tuition	61	52.6
Veterans Administration Approval		
Programs reporting	116	100.0
Approval	103	88.8
No approval	13	11.2

Table B-22

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Nurse Anesthetist
116 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976.....	109	10.321
Graduates		
1973.....	103	5.301
1974.....	104	5.558
1975.....	106	5.981
Expected Graduates		
1976.....	106	6.047
1977.....	100	6.250
1978.....	101	6.693
Hours of Instruction		
Total hours of instruction.....	116	3789.681

Table B-23

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Licensed Practical Nurse
112 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	112	100.0
Program is accredited	35	31.3
Program is not accredited	77	68.8
Award		
Programs reporting	112	100.0
Award conferred	112	100.0
Award not conferred	0	0.0
Frequency of Conducting Programs		
Programs reporting	112	100.0
No regular schedule	0	0.0
Once a year	83	74.1
More than once a year	27	24.1
Other schedule	2	1.8
Program Requirements		
Admission Restricted		
Programs reporting	112	100.0
Admission restricted to employees	3	2.7
Admission not restricted	109	97.3
Program Prerequisites		
Programs reporting	112	100.0
Program prerequisites required	110	98.2
No program prerequisites required	2	1.8
Educational Level and/or Health Training Required		
Programs reporting	110	100.0
Some high school	8	7.3
High school graduate	102	92.7
Less than 2 years of college	0	0.0
2 years of college	0	0.0
Associate degree	0	0.0
3 years of college	0	0.0
4 years of college	0	0.0
Bachelor's degree	0	0.0
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	0	0.0
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B-23/Licensed Practical Nurse

Program Characteristics	Number	Percent
Registered Nurse preparation	0	0.0
LPN (LVN) training	0	0.0
Nursing Aide training	1	0.9
Other specific health training	0	0.0
Total Prerequisites reported	111	
Program Finances		
Tuition Charge		
Programs reporting	112	100.0
Tuition	86	76.8
No tuition	26	23.2
Veterans Administration Approval		
Programs reporting	112	100.0
Approval	85	75.9
No approval	27	24.1

Table B-24

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS

Licensed Practical Nurse
112 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976	106	33.179
Graduates		
1973	104	29.923
1974	105	29.733
1975	110	28.691
Expected Graduates		
1976	111	29.766
1977	108	31.639
1978	103	32.136
Hours of Instruction		
Total hours of instruction	112	1703.428

Table B-25

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Emergency Medical Technician
110 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	110	100.0
Program is accredited	0	0.0
Program is not accredited	110	100.0
Award		
Programs reporting	110	100.0
Award conferred	97	88.2
Award not conferred	13	11.8
Frequency of Conducting Programs		
Programs reporting	110	100.0
No regular schedule	38	34.5
Once a year	22	20.0
More than once a year	45	40.9
Other schedule	5	4.5
Program Requirements		
Admission Restricted		
Programs reporting	110	100.0
Admission restricted to employees	8	7.3
Admission not restricted	102	92.7
Program Prerequisites		
Programs reporting	110	100.0
Program prerequisites required	75	68.2
No program prerequisites required	35	31.8
Educational Level and/or Health Training Required		
Programs reporting	75	100.0
Some high school	4	5.3
High school graduate	55	73.3
Less than 2 years of college	0	0.0
2 years of college	0	0.0
Associate degree	0	0.0
3 years of college	0	0.0
4 years of college	0	0.0
Bachelor's degree	1	1.3
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	2	2.7
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B-25/Emergency Medical Technician

Program Characteristics	Number	Percent
Registered Nurse preparation	0	0.0
LPN (LVN) training	0	0.0
Nursing Aide training	2	2.7
Other specific health training	42	56.0
Total Prerequisites reported	106	
Program Finances		
Tuition Charge		
Programs reporting	110	100.0
Tuition	63	57.3
No tuition	47	42.7
Veterans Administration Approval		
Programs reporting	109	100.0
Approval	13	11.9
No approval	96	88.1

Table B-26

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS

Emergency Medical Technician
110 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976	61	42.279
Graduates		
1973	46	45.609
1974	67	58.507
1975	82	68.488
Expected Graduates		
1976	102	63.304
1977	95	64.484
1978	85	65.247
Hours of Instruction		
Total hours of instruction	110	188.073

Table B-27

FRAMEWORK CHARACTERISTICS FOR SELECTED OCCUPATIONS

Respiratory Therapy Technician
107 Programs

Program Characteristics	Number	Percent
Accreditation Status		
Programs reporting	107	100.0
Program is accredited	46	43.0
Program is not accredited	61	57.0
Award		
Programs reporting	107	100.0
Award conferred	61	57.0
Award not conferred	46	43.0
Frequency of Conducting Programs		
Programs reporting	107	100.0
No regular schedule	57	53.3
Once a year	39	36.4
More than once a year	8	7.5
Other schedule	3	2.8
Program Requirements		
Admission Restricted		
Programs reporting	107	100.0
Admission restricted to employees	42	39.3
Admission not restricted	65	60.7
Program Prerequisites		
Programs reporting	107	100.0
Program prerequisites required	100	93.5
No program prerequisites required	7	6.5
Educational Level and/or Health Training Required		
Programs reporting	100	100.0
Some high school	3	3.0
High school graduate	95	95.0
Less than 2 years of college	1	1.0
2 years of college	0	0.0
Associate degree	1	1.0
3 years of college	0	0.0
4 years of college	0	0.0
Bachelor's degree	0	0.0
Master's degree	0	0.0
Ph.D. or Ph.D. candidate	0	0.0
Seminary education	0	0.0
Other academic education	0	0.0
Radiologic Technologist preparation	0	0.0
Medical Technologist preparation	0	0.0

continued

Table B-27/Respiratory Therapy Technician

Program Characteristics	Number	Percent
Registered Nurse preparation.....	0	0.0
LPN (LVN) training.....	1	1.0
Nursing Aide training.....	4	4.0
Other specific health training.....	2	2.0
Total Prerequisites reported.....	107	
Program Finances		
Tuition Charge		
Programs reporting.....	107	100.0
Tuition.....	35	32.7
No tuition.....	72	67.3
Veterans Administration Approval		
Programs reporting.....	106	100.0
Approval.....	30	28.3
No approval.....	76	71.7

Table B-28

CONTENT CHARACTERISTICS FOR SELECTED OCCUPATIONS

Respiratory Therapy Technician
107 Programs

Program Characteristics	Number Reporting	Mean
Students and Graduates		
Students enrolled April, 1976	67	7.985
Graduates		
1973	60	5.700
1974	73	6.425
1975	85	6.471
Expected Graduates		
1976	93	6.817
1977	84	8.929
1978	78	9.667
Hours of Instruction		
Total hours of instruction	107	1428.944

Please return no later than MARCH 29, 1976 to the American Hospital Association, 840 North Lake Shore Drive, Chicago, Illinois 60611

U.S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH RESOURCES ADMINISTRATION
BUREAU OF HEALTH MANPOWER
IN COLLABORATION WITH THE

AMERICAN HOSPITAL ASSOCIATION

1976 SURVEY OF HEALTH OCCUPATIONS TRAINING PROGRAMS IN HOSPITALS
QUESTIONNAIRE 1

Office of Management and
Budget No. 68-S75072
Approval Expires November 30, 1976

AHA Number

RETURN OF QUESTIONNAIRE: Since the return of all questionnaires is essential to assure reliable results, please return the questionnaire even if your hospital has no training programs.

SCOPE OF THE SURVEY: This survey is concerned only with nursing and allied health training programs in your hospital which have all of the characteristics listed in Section A, below. Please read and complete Section A, and proceed per the instructions provided.

SECTION A – PROGRAM CRITERIA

INSTRUCTION: Please read the 4 items below and indicate in the appropriate box whether or not your hospital has one or more nursing or allied health training programs meeting ALL 4 of the following:

PROGRAM CRITERIA

(a) Is IN OPERATION or READY TO BE PUT INTO OPERATION when needed;
(b) Is designed to train persons in the fields of NURSING or ALLIED HEALTH (Excludes training programs focusing on maintenance or central service staff);
(c) Prepares persons for service in an OCCUPATION or at an OCCUPATIONAL SKILL LEVEL NEW to them (Excludes programs that are primarily orientation, refresher courses, and continuing education); and
(d) Includes a minimum of 36 CLOCK HOURS total of instruction/training, BASED ON A WRITTEN OUTLINE, which is given either in the classroom, or in a work-related location, or at both sites.

Does your hospital have one or more nursing or allied health training programs which meet ALL 4 of the above criteria?

YES ☐ NO ☐

IF YES, please proceed to SECTION B and complete the questionnaire for the specific programs meeting the 4 criteria. Do not include in Section B any programs in your hospital that do not possess all of the above characteristics.

IF NO, please stop. Please sign and return the questionnaire in the enclosed self-addressed envelope. Thank you.

SECTION B – INDIVIDUAL PROGRAM IDENTIFICATION

NOTE: Please do not complete this section unless you responded 'YES' to the Question above. If you responded 'YES', complete this section only for those programs meeting ALL 4 program criteria.

INSTRUCTIONS

Please mark with an X
(1) the type of institution(s) which select the students/trainees for entry into each individual program
(2) the type of institution in which the principal administrative offices of the program are located

DEFINITIONS FOR INSTRUCTIONS (1) AND (2) ABOVE.

(1) A STUDENT/TRAINEE is an individual who receives education or training in a program meeting all 4 program criteria. He may be an employee of a hospital or a nonemployee. He may be considered by the program administrators to be either a student, a trainee, or both.
(2) The PRINCIPAL ADMINISTRATIVE OFFICE OF THE PROGRAM is, for purposes of this survey, the office of the director of the program. If the program does NOT have a designated director, then this office will be either the business office of the program (when students/trainees pay fees) or the personnel office of the program (when students/trainees do NOT pay fees).

For AHA use only	PROGRAM	(1) Students/trainees are selected for entry into the program by (Check as many as applicable)				(2) The principal administrative office of the program is located in (Check one category only)			
		Your Hospital	Another Hospital	Junior or Senior College	Another Institution (for example, high school)	Your Hospital	Another Hospital	Junior or Senior College	Another Institution (for example, high school)
	CLINICAL LABORATORY SERVICES	COL 12	COL 13	COL 14	COL 15	COL 16	COL 17	COL 18	COL 19
0505	Specialist in Blood Bank Technology								
0515	Cytotechnologist								
0520	Hematology Technician								
0525	Histologic Technician								
0530	Medical Lab. Assistant								
0540	Medical Lab. Technician								
0545	Medical Technologist								
	DIETETIC AND NUTRITIONAL SERVICES								
1505	Dietary Aide								
1510	Dietetic Technician								
1515	Dietitian								
1525	Food Service Supervisor								
	EMERGENCY SERVICES								
1305	Ambulance Attendant								
1315	Emergency Medical Technician								
	INFORMATION AND COMMUNICATION								
2535	Medical Photographer								
	MEDICAL INSTRUMENTATION								
3405	Cardiopulmonary Technician								
3415	Dialysis Technician								
3420	Electrocardiographic Technician								
3425	Electrocardiographic/ Electroencephalographic Technician								
3430	Electroencephalographic Technologist/Technician								
8040	Respiratory Therapist								
8045	Respiratory Therapy Technician								

Continued on Reverse Side

PLEASE REVERSE ATTACHED CARBON PAPER BEFORE COMPLETING THIS PAGE

For AHA use only	PROGRAM	(1) Students/trainees are selected for entry into the program by (Check as many as applicable)				(2) The principal administrative office of the program is located in (Check one category only)			
		Your Hospital	Another Hospital	Junior or Senior College	Another Institution (for example, high school)	Your Hospital	Another Hospital	Junior or Senior College	Another Institution (for example, high school)
	MEDICAL RECORDS	COL 12	COL 13	COL 14	COL 15	COL 16	COL 17	COL 18	COL 19
3710	Medical Records Technician								
3715	Medical Transcriptionist								
	MENTAL HEALTH								
4805	Mental Health Technician/ Assistant								
4810	Mental Health Technologist								
4815	Mental Retardation Aide								
4820	Psychiatric Aide								
4821	Advanced Psychiatric Aide								
	NUCLEAR MEDICINE								
4205	Nuclear Medicine Technologist/Technician								
	NURSING SERVICES								
4301	Nurse, Registered								
4335	Nurse, Licensed Practical								
4342	Nurse Aide/Orderly								
4343	Advanced Nurse Aide/ Orderly								
4345	Nurse, Anesthetist								
4350	Nurse, Midwife								
4355	Nurse, Practitioner								
4360	Obstetrical Technician								
4365	O.R. Surgical Technician								
0155	Unit Clerk (Ward Clerk, Ward Secretary)								
0156	Unit Manager								
	NURSE SPECIALTY AND OTHER RELATED								
4410	Nurse Inhouse Specialty Coronary Care/Intensive Care								
4432	Nurse Inhouse Specialty Hemodialysis/Renal Dialysis								
4444	Nurse Inhouse Specialty Intravenous Technician								
4464	Nurse Inhouse Specialty Pharmacology								
	Nurse, Other Inhouse Specialties (Please specify)								
	Nurse, Other Specialties (Please specify) (Master's Programs)								
	PHARMACY SERVICES								
4920	Pharmacy Technician								
	PHYSICIAN EXTENDER PERSONNEL								
5805	Physician Assistant – Primary Care								
5810	Physician Assistant – Specialist								
	RADIOLOGICAL SERVICES								
6710	Radiation Therapy Technologist								
6715	Radiologic Technologist								
	SOCIAL SERVICES AND COUNSELING								
8505	Alcohol/Drug Abuse Specialist								
8510	Clinical Pastoral Counselor								
	OTHER (please specify)								

SIGNATURE: _____ DATE: _____

Please print the name, title and phone number of the person completing this questionnaire:

NAME: _____

TITLE: _____ PHONE: ( ) _____

PLEASE RETURN BY SEPTEMBER 30, 1976, TO THE AMERICAN HOSPITAL ASSOCIATION, 840 NORTH LAKE SHORE DRIVE, CHICAGO, ILLINOIS 60611

FOLLOW-UP MAILING

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
HEALTH RESOURCES ADMINISTRATION
BUREAU OF HEALTH MANPOWER
IN COLLABORATION WITH THE
AMERICAN HOSPITAL ASSOCIATION

Office of Management and Budget No. 68-S75072; Approval Expires November 30, 1976

1976 SURVEY OF HEALTH OCCUPATIONS TRAINING PROGRAMS IN HOSPITALS

QUESTIONNAIRE II — MAY 1976

Hospital File Copy

Introduction —

This questionnaire is the basis for the publication, *Health Occupations Training Programs Administered by Hospitals: A Directory*, and provides important data for health planners and student counselors. Your hospital has responded to an earlier questionnaire and indicated that the program recorded on the label above should be included in the Directory.

Please complete this questionnaire as soon as possible and return it to your administrator, who will forward it to the American Hospital Association.

To classify programs properly and thus enhance the value of the Directory, it is especially important to complete accurately the questions regarding educational requirements (question 5), frequency of offering (question 6), length of program (question 9), accreditation status (question 11), and number of individuals completing the program (questions 16 and 17).

If you need additional copies of this questionnaire, please contact your administrator. If you have any questions about the survey, please call James Hauge or Peter Kralovec of the American Hospital Association at (312) 645-8265.

FOR AHA USE ONLY
Card 1 COL 14-80

PROGRAM DETERMINANTS

1. By what title is the program listed on the label on the front page known at your hospital?

_____

2. Does your program have the following characteristics?

	Yes	No	
a) Is in operation or ready to be put into operation when needed	☐	☐	Card 2 COL 14
b) Is independently administered by the hospital (NOT part of a junior or senior college degree program, cooperative program with a high school/vocational school, or a correspondence course)	☐	☐	15
c) Includes at least 36 clock hours total of instruction, based on a written outline, which is given either in the classroom, or in a work-related location, or at both sites	☐	☐	16
d) Is designed to train persons in the fields of nursing or allied health (EXCLUDES training programs focusing on maintenance or central service staff)	☐	☐	17
e) Prepares persons for service in an occupation or at an occupational skill level new to them (EXCLUDES programs that are *primarily* orientation, refresher courses, and continuing education)	☐	☐	18

If the program *does not* have ALL of the above characteristics, please skip the remaining questions, sign, date, and *return the questionnaire* to the American Hospital Association.

If the program *does* have ALL of the above characteristics, please complete the questionnaire.

DEFINITION

A STUDENT/TRAINEE is an individual who receives education or training in a program as defined above in question 2. He may be an employee of a hospital or a nonemployee. He may be considered by the program administrators to be either a student, a trainee, or both.

3a. Please review the *Glossary of Occupational Titles* and indicate below the code number of the occupation which most closely resembles that for which the students/trainees are being trained.

Occupational Title Code ☐☐-☐☐ 19-22

3b. If no title approximates the occupation for which the students/trainees are being trained, please give the occupational title and description of the occupation

Occupational Title _____ 23 ☐

Description _____ 24 ☐

_____

_____

_____

_____

B. BACKGROUND INFORMATION

Card 2

25

4. Which of the following definitions describes the program? (Check one only)

☐ **Basic Occupational Preparation:** Program designed to provide students/trainees with the knowledge and skills needed to work in a specific occupation at the entry level of that occupation. Entry into the program does not necessarily require previous formal training, but may build on previous practical experience or informal training. Typically, this type of program grants the "first professional degree," leads to certification or licensure, or prepares the student/trainee for an entry-level job.

☐ **Advanced Education or Training:** Program designed to provide health workers with education or training beyond that which is offered as "Basic Occupational Preparation," and/or confers additional professional recognition in a specific discipline or occupation. This type of program includes *specialty training* to qualify an individual in a recognized specialty of his discipline, for which there are specific educational requirements beyond "Basic Occupational Preparation." Included here would be programs such as nurse specialty programs.

5a. Is the prior completion of a minimum educational level or of specific health training required for entry into the program?

☐ Yes ☐ No If No, skip to question 6a.

26

5b. If Yes, what is that level and/or what is that training?

MINIMUM EDUCATIONAL LEVEL

27-28

29-30

01 ☐ Some high school (specify minimum grade_____)
02 ☐ High school graduation or certificate of high school equivalency (G.E.D.)
03 ☐ Less than 2 years of college
04 ☐ 2 years of college (without degree)
05 ☐ Associate degree
06 ☐ 3 years of college
07 ☐ 4 years of college (without degree)
08 ☐ Bachelor's degree
09 ☐ Master's degree
10 ☐ Ph.D. or Ph.D. candidate
11 ☐ Seminary education
12 ☐ Other academic education (please specify) _____

_____

SPECIFIC HEALTH TRAINING

31 ☐ Radiologic Technologist preparation
32 ☐ Medical Technologist preparation
33 ☐ Registered Nurse preparation
34 ☐ LPN (LVN) training
35 ☐ Nursing aide training
36 ☐ Other specific health training e.g., Ambulance Attending, First Aid, etc. (please specify) _____

_____

_____

Card 2

39-40

6a. Normally, how often do students/trainees enter the program? (Check one only)

01 ☐ No regular schedule (program offered as needed)

02 ☐ Scheduled once a year

03 ☐ Scheduled more than once a year _____ times per year

04 ☐ Other schedule (please specify) _____

41-42

6b. How many times has a training session begun or a class entered the program in the past three calendar years (1973, 1974, 1975)? _____

43-45

7a. If date is known, in what calendar year did the program as presently administered first accept students/trainees? _____

46-49

7b. If date is not known, please estimate the number of years this program has been in operation. _____ years.

8a. As part of this program do students/trainees receive any part of their education/training at another institution?

☐ Yes ☐ No If No, skip to question 9a.

50

8b. If Yes, please specify with an (x) the nature of the education/training.

		1	2	3	4	5	6
	Education/training	High school	Junior college	4-Year college or university	Another hospital	Nursing home	Other (please specify)
1	Provides basic science courses						
2	Psychiatric nursing experience						
3	Pediatric nursing experience						
4	Other nursing experience (please specify)						
5	Clinical specialization (please specify)						
6	Other (please specify)						

51-66

9a. How long does it take a student/trainee (full-time, entering without advanced standing) to complete the program including all didactic and clinical education/training, normal vacation time, and probationary hours, if applicable? (Report either months or weeks.)

Number of calendar months _____. Or number of weeks _____.

67-

Card 2

71-72

73-76

9b. Indicate below both the number of clock hours that a student spends in receiving clinical and/or didactic instruction in a normal week of training and the TOTAL number of clock hours spent in receiving instruction throughout the duration of the program as indicated in question 9a.

_____ Hours per week _____ Total hours

C. AWARD AND ACCREDITATION

Card 3

10a. Does the student/trainee who successfully completes the program receive a certificate, diploma, or degree?

14-16

☐ Yes ☐ No If No, skip to question 11a

DEFINITION FOR QUESTION 10b.

CERTIFICATE OF COMPLETION is a certificate awarded for training of at least 36 clock hours duration but not more than 36 months duration after entry into the program.

10b. If Yes to question 10a, indicate with an (x) the institution conferring the award and the type of award given. (If more than one institution confers an award, please check all appropriate boxes.)

	Institution conferring the award	1 Certificate of completion	2 Diploma	3 Associate degree	4 Bachelor's degree	5 Other (please specify)
1	This hospital					
2	Another hospital*					
3	High school, or Board of Education					
4	2-year college					
5	4-year college or university					
6	Other (please specify)					

17-40

*Please give name and location of hospital which makes the award:

_____

_____

41-43

DEFINITION FOR QUESTION 11

Accreditation is the process by which an agency or an organization evaluates and recognizes an institution's *program of study* as meeting certain predetermined qualifications or standards.

Card 4

14-16

11a. Has the program received accreditation or is it in process of applying for accreditation, as defined above, from a *national* accrediting agency or a *national* health professional association?

☐ Yes ☐ No If No, skip to question 12a.

11b. If this program is accredited or is in the process of applying for accreditation, please check the agency(ies) which accredit the program and indicate the program's accreditation status as of the date of that agency's(ies') last onsite visit.

Agency	Year Program Last Visited for Accreditation	Status of Accreditation F=Full P=Provisional IP=In Process
01 ☐ American Association of Nurse Anesthetists		
02 ☐ American Association of Pastoral Assistants		
03 ☐ American College of Nurse Midwives		
04 ☐ American Dental Association, Council on Dental Education		
05 ☐ American Dietetic Association		
American Medical Association, Council on Medical Education in collaboration with:		
06 ☐ American College of Radiology		
07 ☐ American Society of Radiologic Technologists		
08 ☐ American Society of Clinical Pathologists		
09 ☐ American Society for Medical Technology		
10 ☐ Society of Nuclear Medicine		
11 ☐ Society of Nuclear Medicine Technologists		
12 ☐ American College of Surgeons		
13 ☐ American Hospital Association		
14 ☐ Association of Operating Room Nurses		
15 ☐ Association of Operating Room Technicians		
16 ☐ American Association for Respiratory Therapy		
17 ☐ American College of Chest Physicians		
18 ☐ American Society of Anesthesiologists		
19 ☐ American Thoracic Society		
20 ☐ Other AMA collaborating agency(ies) (please specify) _____		

17-25

26-34

35-43

44-52

53-61

List of agencies continued on page 6.

List of agencies continued from page 5.

Card 4

Agency	Year Program Last Visited for Accreditation	Status of Accreditation F = Full P = Provisional IP = In Process
21 ☐ American Medical Technologists		
22 ☐ American Public Health Association		
23 ☐ Association for Clinical Pastoral Education		
24 ☐ Association of Medical Rehabilitation Directors and Coordinators, Inc.		
25 ☐ National Association for Practical Nurse Education and Service		
26 ☐ National League for Nursing		
27 ☐ Other (please specify)_____		
_____		

62-70

71-79

D. STUDENT/TRAINEE FINANCING

Card 5

14-16

12a. Is there any charge to the student/trainee for tuition?

☐ Yes ☐ No

12b. Has your hospital received a letter of approval from your state's designated approving agency for veterans affairs or from the Veterans Administration's administrator approving this program for attendance under the GI bill?

☐ Yes ☐ No

17-19

E. STUDENT/TRAINEE CHARACTERISTICS AND PROGRAM STATUS

DEFINITION FOR QUESTION 13

CLASS/TRAINING SESSION is one or more students/trainees meeting regularly to study the same subject or procedures either in a classroom setting or a work environment.

13. Were there one or more classes/training sessions in progress as of April 15, 1976?

☐ Yes ☐ No If No, skip to question 16.

20-22

14. **What was the enrollment of each class/training session in progress as of April 15, 1976? Start by listing your most recent class/training session on the top line.**

Entering date of each class	Male	Female	Total
Total students/trainees			

Card 5
23-34
35-46
47-56
Card 6
14-25
26-34

15. In the following table, fill in the racial/ethnic distribution of the students/trainees in all classes in progress as of April 15, 1976. (Report each student/trainee in the racial/ethnic group with which the student/trainee most closely identifies. EACH STUDENT/TRAINEE SHOULD BE REPORTED IN ONLY ONE GROUP. The total number of students/trainees reported below should equal the total number reported in question 14.)

Racial/Ethnic Group	Male	Female	Total
Black (not of Hispanic origin)			
Asian or Pacific Island (Chinese, Japanese, Filipino, Samoan, Korean)			
American Indian or Alaskan Native			
White (not of Hispanic origin)			
Hispanic (Mexican, Cuban, Puerto Rican, Central or South American or other Spanish cultural origin regardless of race)			
Do not know			
Other (please specify)			
Total students/trainees			

35-43
44-52
53-61
62-70
71-79
Card 7
14-22
23-31
32-40

AMERICAN HOSPITAL ASSOCIATION
840 NORTH LAKE SHORE DRIVE • CHICAGO, ILLINOIS 60611

16,500-5/76-5064

AMERICAN HOSPITAL ASSOCIATION • 840 North Lake Shore Drive • Chicago, Illinois 60611

To Be Retained For Your Hospital Files

Office of Management and Budget No. 68-S75072; Approval Expires November 30, 1976

1976 SURVEY OF HEALTH OCCUPATIONS TRAINING PROGRAMS IN HOSPITALS

MAJOR CATEGORY INCLUSIONS

01 Administration, Planning, and Office
03 Biomedical Engineering
05 Clinical Laboratory Services
07 Dental Services
10 Dietetic and Nutritional Services
13 Emergency Services
16 Environmental Services
19 Health Education
22 Health-Related Teacher Preparation
25 Information and Communication
34 Medical Instrumentation and Machine Operation
37 Medical Record
40 Mental Health
42 Nuclear Medicine
43 Nursing and Related Services
46 Vision Care
49 Pharmacy Services
58 Physician Extender
61 Podiatric Services
67 Radiologic Services
70 Rehabilitation—Occupational
73 Rehabilitation—Physical
76 Rehabilitation—Not Elsewhere Classified
80 Respiratory Therapy Services
85 Social Services and Counseling
88 Speech and Hearing Services
91 Veterinary Services
95 Health Professionals Not Elsewhere Classified

GLOSSARY OF OCCUPATIONAL TITLES

01 ADMINISTRATION, PLANNING, AND OFFICE personnel function at various levels to maintain and operate clinical offices and institutions and to plan for improved health care and delivery.

01 - *05 Health Economist:* Applies specialized knowledge of the laws of supply and demand, marketing, polling, econometrics, and motivation research to permit the efficient delivery of health services.

01 - *10 Health Care Administrator:* Occupies top-level positions in a variety of health care settings: hospitals, official health agencies, long-term care facilities, social service agencies, voluntary and tax paying health agencies, and public health agencies. Policy development, activity coordination, procedural development and planning are the primary functions of the position.

01 - *15 Health Care Assistant Administrator:* Occupies middle management positions in a variety of clinical and health care settings: hospitals, public and private health agencies, long-term care facilities, social service agencies.

01 - *20 Health Planner:* Works in state and areawide health planning agencies and related programs implementing community goals including planning and evaluating developmental policies.

01 - *25 Health Systems Analyst:* Develops and applies the principles of industrial and systems engineering, operations research, and management to the design, evaluation, and implementation of improved health care.

01 - *36 Long-Term Care Administrator:* Directs and coordinates all operations and activities of extended care facilities.

01 - *40 Medical/Dental Secretary:* Assists physicians and/or dentists through the use of medical shorthand, typing, filing, accounting, appointment scheduling, receptionist duties, and office management.

01 - *45 Medical Office Assistant:* Assumes responsibility for routine administrative, clerical, and record-keeping procedures in a physician's office, assists the physician in medical examinations and treatments, and cares for medical equipment and supplies.

01 - *50 Rehabilitation Administrator:* Manages a rehabilitation agency's business aspects: personnel, budget control, public relations work, training, program planning, and services coordination.

01 - *55 Unit Clerk:* Handles routine clerical and reception work in a floor nursing unit, receiving patients and visitors, scheduling appointments, monitoring the location of all ward staff, and, where hospital policy permits, transcribing doctors' orders, ordering supplies, and up-dating information on patients' charts. (Ward Clerk)

01 - *56 Unit Manager:* Supervises and coordinates administrative management functions for one or more patient care units: oversees unit clerks, initiates clerical procedures and serves as a liaison for the unit with other hospital departments. (Ward Service Manager, Ward Supervisor)

03 BIOMEDICAL ENGINEERING personnel combine basic engineering and biomedical sciences in order to design, assemble, and adapt medical devices, instruments, and processes to improve the quality and cost in the delivery of medical health care.

03 - *05 Biomedical Engineer:* Utilizes engineering ideas and techniques in the development of new instruments, equipment, processes, and systems for the medical care of patients and the improvement of health systems.

03 - *10 Biomedical Engineering Technician:* Assembles, repairs, and adapts medical equipment to assist biomedical engineers, physicians, and scientists in the development and maintenance of medical equipment and systems for the delivery of medical and health care. (Biomedical Equipment Technician)

05 CLINICAL LABORATORY SERVICES personnel work in a clinical laboratory setting, collecting, mounting, processing, classifying and analyzing laboratory specimens.

05 - *05 Specialist in Blood Bank Technology:* Medical technologist, working under the direction of a pathologist, physician, or laboratory director, prepared to collect, classify, store, and process blood, including preparation of components from whole blood, detection and identification of antibodies in patient and donor bloods, and selection and delivery of suitable blood for transfusion.

05 - *10 Chemistry Technologist:* Works under the supervision of a pathologist, physician, or qualified scientist in performing qualitative and quantitative chemical analyses of body fluids and exudates, utilizing quantitative equipment and a wide range of laboratory instruments, to provide information for diagnosing and treating diseases.

05 - *15 Cytotechnologist:* Works under the supervision of a pathologist, physician or medical technologist, in handling, staining, mounting, and evaluating cells from the human body to determine cellular variations and abnormalities such as cancer and other physiologic changes.

05 - *19 Hematologist:* Directs and supervises analysis and and testing of blood specimens, interprets test results toward disease treatment. Directs operations of hospital blood bank, which involves supervision of hematology technologists and specialists in blood bank technology, and develops diagnostic reports for approval by the pathologist.

05 - *20 Hematology Technologist:* Works under supervision of a hematologist, medical technologist, or laboratory director, in performing quantitative, qualitative, and coagulation tests on cellular and plasma components of blood for use in the diagnosis and treatment of disease.

05 - *25 Histologic Technician:* Works under supervision of a pathologist or other qualified physician in sectioning, staining, and mounting human or animal tissues and fluid for microscopic study.

05 - *30 Medical Laboratory Assistant:* Works under the direct supervision of a medical technologist, pathologist, physician, or qualified scientist, in performing routine laboratory procedures requiring basic technical skills and minimal independent judgment, in chemistry, hematology, and microbiology. (Certified Laboratory Assistant)

05 - *35 Medical Laboratory Scientist:* Performs clinical analysis procedures and research in the medical/clinical laboratories utilizing disciplines such as chemistry, biochemistry, bacteriology, and microbiology.

05 - *40 Medical Laboratory Technician:* Works under the supervision of a medical technologist, pathologist, or physician, in performing more complex or specialized bacteriological, biological, and chemical tests, requiring limited independent judgment or correlation competency, to provide data for use in the diagnosis and evaluation of effective treatment of disease.

05 - *45 Medical Technologist:* Performs a wide range of complex and specialized procedures in all general areas of the clinical laboratory, making independent and correlation judgments, and working in conjunction with pathologists, physicians, and qualified scientists. May supervise and/or teach laboratory personnel.

05 - *50 Microbiology Technologist:* Works with a minimum of supervision by a pathologist, physician, or laboratory director, in performing many bacteriological, viral, parasitological, immunologic, and serologic procedures in a clinical laboratory setting.

05 - *55 Public Health Laboratory Scientist:* Performs clinical laboratory procedures and research with specific public health focus or within a public health setting.

05 - *60 Prosector:* Performs complete gross autopsies under the supervision of a physician, cuts blocks for slides, applies special stains for bacteria, and freezes sections for rapid diagnosis.

07 DENTAL SERVICES personnel render varieties of services to the dentist; they do general office work, laboratory work, and they assist the dentist at the chairside.

07 - *20 Dental Assistant:* Assists dentist at the chairside in dental operatory, performs reception and clerical functions, and carries out dental radiography and selected dental laboratory work.

07 - *25 Dental Hygienist:* Professional oral health clinician who helps the public develop and maintain optimum oral health. As a member of the dental health team, the dental hygienist performs preventive, restorative, and therapeutic services under the supervision of a dentist. The dental hygienist is the only licensed dental auxiliary and his/her specific responsibilities vary depending upon the state dental practice act.

07 - *30 Dental Technician:* Prepared to construct complete and partial dentures, make orthodontic appliances, fix bridgework, crown, and other dental restorations and appliances, as authorized by dentists. (Dental Laboratory Technician)

10 DIETETIC AND NUTRITIONAL SERVICES personnel translate nutritional needs into the selection, purchasing, preparation, and service of appropriate foods along with the maintenance of equipment, sanitation and cost control. They pro-

vide nutritional education to individuals and groups, and serve as nutritional consultants to health facilities and communities.

10 - *05 Dietary Aide:* Performs nontechnical food preparation routines as directed by a supervisor, serves meals to patients, and assists with food-related jobs in health care facilities. (Dietetic Aide)

10 - *10 Dietetic Technician:* Functions as middle management and service personnel in the nutritional care of individuals in health care facilities, assisting with the planning, implementation, and evaluation of food programs, working with both the food service supervisor and the dietitian and, where hospital policy permits, training and supervising dietary aides. (Food Service Manager, Food Service Assistant, Food Service Technician)

10 - *15 Dietitian:* Applies the principles of nutrition and management in administering institutional food service programs, plans special diets at physicians' requests, and instructs individuals and groups in the application of nutrition principles to the selection of food.

10 - *25 Dietetic Assistant:* Writes food menus following dietetic specifications, coordinates food service to patients, orders supplies, maintains sanitation, and oversees the work of food service employees in health care facilities. (Food Service Supervisor)

10 - *30 Nutritionist:* Adapts and applies food and nutrient information to the solution of food problems, the control of disease, and the promotion of health; performs nutritional research, instructs groups and individuals about nutritional requirements, and helps people develop meal patterns to meet their nutritional needs.

13 EMERGENCY SERVICES personnel administer temporary medical help by responding to, evaluating, and assisting in emergency conditions.

13 - *05 Ambulance Attendant:* Provides first aid and assistance in the transportation of critically ill and injured persons.

13 - *10 Emergency and/or Disaster Specialist:* Develops and implements hospitalwide procedures for dealing with inhouse and community emergencies and disasters.

13 - *15 Emergency Medical Technician:* Responds to medical emergency calls, evaluates the nature of the emergency, and carries out specified diagnostic and emergency treatment procedures under standing orders or the specific directions of a physician.

16 ENVIRONMENTAL SERVICES personnel inspect, evaluate, and gather data for their use in the design, operation, and control of systems for prevention and elimination of environmental hazards.

16 - *05 Environmental Engineer:* Applies engineering principles to the control, elimination, and prevention of environmental hazards such as air pollution, water pollution, solids pollution, and noise pollution. (Sanitary Engineer)

16 - *10 Environmental Engineering Assistant:* Works with and assists the environmental engineer in his tasks of designing and controlling systems to eliminate and control environmental health hazards.

16 - *15 Environmental Health Technician:* Assists in the survey of environmental hazards and performs technical duties under professional supervision in many areas of environmental health such as pollution control, radiation protection, and sanitation protection. (Sanitarian Technician)

16 - *20 Environmentalist:* Plans, develops, and implements standards and systems to improve the quality of air, water, food, shelter, and other environmental factors, manages comprehensive environmental health programs, and promotes public awareness of the need to prevent and eliminate environmental health hazards. (Sanitarian)

16 - *23 Health Care Facilities Housekeeper:* Develops, implements, and supervises techniques used to control, eliminate and prevent cross infection or other environmental hazards in health care facilities. Establishes standards and work procedures for the housekeeping staff in accordance with the established policies of the facility. Maintains budgets, inventories supplies and equipment, and supervises personnel hiring practices.

16 - *25 Industrial Hygienist:* Conducts programs in industry to measure and help control, eliminate, and prevent occupational hazards and diseases.

16 - *30 Sanitarian Aide:* Collects data on and measures environmental sanitation conditions and implements corrective action on health hazards for which specific guidelines exist.

19 HEALTH EDUCATION personnel acquaint groups and individuals with the standards of optimum health and the principles of achieving and maintaining optimum health.

19 - *05 Community/Public Health Educator:* Alerts community groups and individuals to changing patterns of health care, to health hazards, and to activities which will promote community health and safety.

19 - *10 School Health Educator:* Teaches elementary, secondary and college students principles of personal health sciences, total fitness, family living, consumer and environmental health, and community health trends and resources.

19 - *15 Health Educator:* Influences public attitudes toward achieving and maintaining high standards of health care through teaching and utilizing school and community resources, as well as providing consultation to school administrators, health councils, and community groups.

22 HEALTH-RELATED TEACHER PREPARATION combines teaching skills and health expertise in preparing: (1) Instructors of individuals who are physically disabled, emotionally disturbed, or mentally retarded; and (2) Allied Health Professionals who desire to teach within their specialty area.

22 - *05 Allied Health Educator:* Teaches the specialty in which he was trained to students being prepared in the discipline. May also supervise other individuals in his occupation.

22 - *10 Teacher of the Deaf:* Adapts methods and curriculums in the teaching of elementary and secondary school subjects and special skills to deaf and hard-of-hearing pupils.

22 - *15 Teacher of the Emotionally Disturbed:* Conducts educational programs for emotionally disturbed pupils.

22 - *20 Teacher of the Learning Disabled:* Develops and implements educational programs to assist children in overcoming or compensating for learning disabilities such as aphasia, dyslexia, or other related problems.

22 - *25 Teacher of the Mentally Retarded:* Develops and implements educational programs for trainable or educable mentally retarded persons according to the pupil's level of learning.

22 - *30 Teacher of the Physically Handicapped:* Develops and implements academic and recreational programs for handicapped persons after evaluating the physical limitations, abilities, and needs of the individual.

22 - *32 Teacher of Special Education—Not Elsewhere Classified:* Develops and implements educational programs suited to the needs of students with physical disabilities, mental retardation, or emotional disturbances.

22 - *35 Teacher of the Visually Handicapped:* Teaches academic and practical skills to the blind or visually handicapped through the use of Braille and other specialized methods.

25 INFORMATION AND COMMUNICATION personnel apply a communications orientation to the development, presentation, organization, and recording of medical facts and material for the benefit of medical personnel and the general public.

25 - *05 Health Writer:* Specializes in the writing of health or medical materials.

25 - *10 Medical Communications Specialist:* Knows the properties and capabilities of communications media and applies this knowledge to the design and improvement of communication processes in the health field.

25 - *15 Medical Computer Specialist:* Combines a knowledge of computer science and health science to provide systems and programming support in the medical field.

25 - *20 Medical Illustrator:* Demonstrates medical facts by the creation of illustrations, models and teaching films; serves as a consultant, adviser, and administrator in the field of medical illustration.

25 - *25 Medical Librarian:* Combines a degree in library science with specialized knowledge of medical librarianship and bibliography to acquire, organize, catalog, retrieve, and disseminate medical information.

25 - *30 Medical Library Assistant:* Combines training in library technology and health subjects to assist medical librarians in the process of acquiring, organizing, cataloging, retrieving, and disseminating medical information.

25 - *35 Medical Photographer:* Visually presents medical facts by means of lantern slides, motion pictures, photographs of patients, reproduction of X rays, and/or photomicrographs.

34 MEDICAL INSTRUMENTATION AND MACHINE OPERATION personnel maintain and/or operate equipment and instruments which supplement and support body functions or which provide diagnostic or therapeutic services.

34 - *05 Cardiopulmonary Technician:* Performs a wide range of tests related to the functions and therapeutic care of the heart-lung system, operates and maintains a heart-lung machine for extracorporeal circulation, assists in cardiac catheterization and cardiac resuscitation, and assists in the postoperative monitoring, care, and treatment of heart-lung patients.

34 - *12 Circulation Technologist:* Operates and designs heart-lung machines, dialysis machines, artificial organs, and similar circulation devices and monitoring instruments to provide circulatory support to patients.

34 - *15 Dialysis Technician:* Operates and maintains an artificial kidney machine following approved methods and techniques to provide dialysis treatment for patients with kidney disorders or failures.

34 - *20 Electrocardiographic Technician:* Operates and maintains electrocardiograph machines, records electromotive variation in heart muscle action, and provides data for diagnosis and treatment of heart ailments by physicians.

34 - *25 Electroencephalographic/Electrocardiographic Technician:* Operates and maintains both electroencephalographic and electrocardiographic machines.

34 - *30 Electroencephalographic Technologist/Technician:* Operates and maintains electroencephalographic machines, recording brain waves on a graph to be used by physicians in the diagnosis of brain disorders.

34 - *35 Electromyographic Technician:* Assists physicians in recording and analyzing bioelectric potentials which originate in muscle tissue, including the operation of various electronic devices, maintenance of electronic equipment, assisting with patient care, and record keeping.

37 MEDICAL RECORD personnel plan, organize and manage patient information systems and statistical reports for medical and administrative staff use and health care research.

37 - *05 Medical Record Administrator:* Plans, designs, develops, and manages systems of patient information, administrative and clinical statistical data, and patient medical records, in all types of health care institutions.

37 - *10 Medical Record Technician:* Serves as the skilled assistant to the medical record administrator, carrying out the technical work of coding, analyzing, and preserving patients' medical records and compiling reports, disease indexes, and statistics in health care institutions.

37 - *15 Medical Transcriptionist:* Skilled in typing, medical spelling, medical terminology, and the proper format of medical records and reports; prepared to transcribe medical dictation using mechanical dictating equipment.

40 MENTAL HEALTH personnel assist the health professionals in the prevention and treatment of mental disorders through recreational, occupa-

tional, and educational programs.

40 - *02 Human Services Technologist/Technician:* Employs skills as a generalist, based upon knowledge of human behavior and social problems in settings providing mental health and social rehabilitation services; employs a whole person, noncustodial approach to treating the symptomatic and causative elements that affect the individual's ability to respond to his social environment.

40 - *05 Mental Health Associate/Technician/Assistant:* Works under the supervision of professional personnel in supplementing physical care for persons with emotional problems through recreational, occupational, and readjustment activities, including participation in group therapy with clients and families; refers patients to community agencies, and visits patients after their release from an institution.

40 - *10 Mental Health Technologist:* Works with other mental health professionals in diagnosing psychiatric disorders, counseling and planning treatment for the emotionally disturbed or mentally retarded.

40 - *15 Mental Retardation Aide:* Works under the supervision of professional staff in attending to the physical needs and well-being of mentally retarded patients and in assisting with teaching and recreation processes.

40 - *20 Psychiatric Technician:* Works under the supervision of professional and/or technical personnel in caring for mentally ill patients in a psychiatric medical care facility; assists in carrying out the prescribed treatment plan for the patient; maintains consistent attitudes in communicating with the patient in keeping with the treatment plan, and carries out assigned individual and group activities with patients. (Psychiatric Aide)

40 - *30 Clinical Psychologist:* Employs specialized knowledge in the diagnostic assessment of patients; delivers unique psychological services in the areas of evaluation, therapy, and organization; participates in the ongoing treatment of inpatients and outpatients and conducts and supervises various research projects.

42 **NUCLEAR MEDICINE personnel prepare or use radioactive nuclides in laboratory procedures, scanning-imaging, and function studies for diagnostic, therapeutic, and research purposes.**

42 - *05 Nuclear Medicine Technologist/Technician:* Performs a wide variety of diagnostic tests in human beings and/or on body fluids utilizing radioactive and/or stable nuclides, also applies radioactivity in the course of treatment, makes independent judgments under the general guidance of a nuclear medicine physician.

43 **NURSING AND RELATED SERVICES personnel assist the physician in bedside patient care, in the direction of patient care services within a clinical unit, and provide specialty services as required by institutional and community needs.**

43 - *01 Registered Nurse:* Responsible for the direct care of patients by assisting the physician in administering medications and treatments and by planning, giving and supervising nursing care.

43 - *35 Licensed Practical (Vocational) Nurse:* Participates in the direct basic care of patients under the supervision of a physician or registered nurse, performing various activities such as taking temperatures, pulse and blood pressures, administering medication and performing medical-surgical aseptic techniques. (Practical Nurse, Vocational Nurse)

43 - *42 Nursing Aide/Orderly:* Performs tasks delegated or assigned by the professional nursing staff, including assisting in providing direct patient care of a routine nature, making beds, delivering messages, counting linens, and escorting patients to other departments in the hospital. May also include, where hospital policy permits, the taking of vital signs. In the case of orderlies, includes performing heavier work in the nursing unit, maintaining equipment and may include setting up of traction and performing male catheterization. (Nursing Assistant, Nursing Aide, Orderly, Hospital Attendant, Nursing Attendant)

43 - *45 Nurse Anesthetist:* Registered nurse, prepared to work under an anesthesiologist or physician in administering anesthetic agents to patients before and after surgical and obstetrical operations and other medical procedures.

43 - *50 Nurse Midwife:* Assumes responsibility for the care of apparently normal obstetrical patients during pregnancy, labor, delivery and postnatal period.

43 - *55 Nurse Practitioner:* Registered nurse prepared to carry out functions previously performed by the general practitioner or physician specialist; collaborates with other health professionals in planning and instituting programs for the delivery of primary, acute, or chronic care; provides direct care to clients by making independent decisions about nursing care needs.

43 - *60 Obstetrical Technician:* Assists in the care of mothers in labor and delivery rooms before, during and after delivery under supervision of professional personnel, including hygienic procedures, routine laboratory work, and sterilization of equipment and supplies.

43 - *65 Operating Room Technician:* Works as a general technical assistant on the surgical team by arranging supplies and instruments in the operating room, maintaining antiseptic conditions, preparing patients for surgery and assisting the surgeon during the operation.

43 - *71 Geriatric Care Worker:* Administers to the needs of aged patients, bringing to the task an understanding of the problems of institutionalization, economic needs and attitudes toward the elderly as they relate to this specific population.

43 - *75 Urologic Assistant:* Helps with genital and urological diagnostic and therapeutic procedures; assists with genital and urinary care of spinal cord patients; aids in cystoscopic procedures; maintains aseptic technique. (Urologic Technician)

46 **VISION CARE personnel work with or carry out the prescriptions of the ophthalmologist and optometrist. Their duties include ophthalmic examinations, treatment, and correction of ophthalmic disorders by physical or mechanical measures.**

46 - *20 Ophthalmic Assistant/Technician:* Assists the ophthalmologist in eye examinations and in the treatment of eye diseases and disorders.

46 - *25 Ophthalmic Dispenser:* Adapts and fits corrective eyewear as prescribed by the ophthalmologist or optometrist.

46 - *30 Ophthalmic Laboratory Technician:* Operates machines to grind lenses and fabricate eyewear to prescription.

46 - *31 Ophthalmic Optician:* Grinds lenses and fabricates eyewear, as well as adapts and fits corrective eyewear according to prescription by the ophthalmologist or optometrist.

46 - *35 Optometric Assistant/Technician:* Assists an optometrist in diversified ways, including general office duties, vision testing of patients, administering eye exercises, preparing and fitting corrective lenses, and styling eyewear.

46 - *40 Orthoptist:* Works under supervision of an ophthalmologist in testing for certain eye muscle imbalances and teaching the patient exercises to correct eye-coordination defects.

49 PHARMACY SERVICES personnel assist the pharmacist with selected activities in pharmacy departments to provide pharmaceutical services to patients, nurses, and physicians.

49 - *19 Medication Pharmacy Technician:* Works under the supervision of a pharmacist; administers drugs to patients except for intravenous medications.

49 - *20 Pharmacy Technician:* Assists the pharmacist with selected activities including medication profile reviews for drug incompatibilities, typing prescription labels, prescription packaging, handling of purchase records, inventory control and where hospital policy and state law permit, administering drugs to patients under the supervision of a registered pharmacist.

58 PHYSICIAN EXTENDER personnel render direct and specific assistance to the physician specialist and general practitioner in clinical and research endeavors, taking medical histories, performing detailed physical examinations, and conducting visual, auditory, developmental, and laboratory tests.

58 - *05 Physician Assistant—Primary Care:* Performs physician-delegated functions in the areas of general practice, including family medicine, internal medicine, pediatrics, obstetrics, and emergency medicine.

58 - *10 Physician Assistant—Specialty:* Performs functions delegated by clinical specialist in specific areas of patient care: urology, surgery, pathology, orthopedics, etc.

61 PODIATRIC SERVICES personnel work under the direct supervision of the podiatrist, performing supplementary duties for the foot specialist.

61 - *20 Podiatric Assistant:* Supports the podiatrist in his service to patients by preparing patients for treatment, sterilizing the instruments, performing general office duties, and assisting the podiatrist in preparing dressings, administering treatments, and developing X rays.

67 RADIOLOGICAL SERVICES personnel use ionizing radiation for diagnostic, therapeutic, and research purposes.

67 - *05 Medical Radiation Dosimetrist:* Calculates radiation dosage in the treatment of malignant disease and plans the direction of radiation to its target in the safest way.

67 - *10 Radiation Therapy Technologist/Technician:* Administers X rays and electron beam equipment in order to treat disease in patients, and assists in preparing and handling radioactive materials for therapy purposes.

67 - *15 Radiologic Technologist/Technician:* Maintains and safely uses equipment and supplies necessary to demonstrate portions of the human body on x-ray film or fluoroscopic screen for diagnostic purposes. (X-ray Technician)

67 - *20 Ultrasound Technical Specialist:* Uses acoustic energy for diagnosis, research, and therapy; operates ultrasound equipment to obtain diagnostic results; evaluates results for quality of technique and, in emergency situations, makes interim reports to the medical staff.

70 REHABILITATION—OCCUPATIONAL personnel use work-related skills in treating or training patients who are physically or mentally ill, in preventing disability, in evaluating behavior, and in restoring disabled persons to health and social or economic independence.

70 - *05 Manual Arts Therapist:* Uses industrial arts, workshops, and agricultural activities to assist in the rehabilitation of patients.

70 - *10 Occupational Therapist:* Evaluates the self-care, work, and play/leisure time task performance skills of well and disabled clients of all age ranges; plans and implements programs, and social and interpersonal activities designed to restore, develop and/or maintain the client's ability to accomplish satisfactorily those daily living tasks required of his specific age and necessary to his particular occupational role adjustment.

70 - *15 Occupational Therapy Assistant:* Works under the supervision of an occupational therapist in evaluating clients, planning and implementing programs designed to restore, or develop a client's self-care, work, and play/leisure time task performance skills. Although the assistant requires supervision in conducting a remedial program, he can function independently when conducting a maintenance program.

70 - *20 Rehabilitation Homemaking Specialist:* Trains disabled homemakers to perform normal household activities in spite of their disability.

73 REHABILITATION—PHYSICAL personnel use physical agents, assistive devices and therapeutic exercise for the prevention of disease and disability, and toward restoration of function to disabled persons.

73 - *05 Corrective Therapist/Adapted Physical Education Director:* Provides medically prescribed programs of therapeutic exercise to physically and mentally ill patients to prevent muscular deconditioning resulting from inactivity and to attain resocialization and specific psychiatric objectives.

73 - *10 Exercise Physiologist:* Works with clinicians in hospitals with rehabilitation programs to provide exercise stress testing and cardiovascular rehabilitation for patients.

73 - *12 Orthopedic Technician:* Sets up traction rooms, applies all types of traction, makes casts, and applies splints.

73 - *15 Orthotic/Prosthetic Assistant:* Assists the orthotist/prosthetist in caring for patients by making casts, measurements, and model specifications and fitting supportive appliances and/or artificial limbs.

73 - *20 Orthotic/Prosthetic Technician:* Fabricates and repairs supportive appliances and/or artificial limbs under the guidance of the orthotist/prosthetist and his assistant.

73 - *25 Orthotist/Prosthetist:* Writes specifications for, makes, fits and repairs braces and appliances and/or artificial limbs following the prescription of a physician.

73 - *30 Physical Therapist:* Uses physical agents, biomechanical and neurophysiological principles, and assistive devices in relieving pain, restoring maximum function, and preventing disability following disease, injury or loss of bodily part.

73 - *35 Physical Therapy Assistant:* Assists the physical therapist by assembling equipment, carrying out specified treatment programs, and helping with complex treatment procedures. Other duties include responsibility for the personal care of patients, safety precautions and routine clerical and maintenance work.

76 REHABILITATION—NOT ELSEWHERE CLASSIFIED personnel apply the principles of rehabilitation to diversified areas of therapeutic technique, such as education, fine arts, and recreation.

76 - *05 Art Therapist:* Applies the principles and techniques of art to the rehabilitation of physically and mentally ill patients.

76 - *10 Dance Therapist:* Applies the principles and techniques of dance to the rehabilitation of physically and mentally ill patients.

76 - *15 Educational Therapist:* Instructs patients in academic and vocational subjects to further their medical recovery and prevent mental deconditioning.

76 - *20 Music Therapist:* Uses individual and group musical activities with physically and mentally ill patients to accomplish therapeutic aims, to create an environment conducive to treatment, or to influence behavior.

76 - *25 Recreational Therapist:* Plans, organizes, and directs medically approved recreation programs such as sports, trips, dramatics, arts and crafts, either to help clients in recovery from illness or in coping with temporary or permanent disability.

76 - *30 Recreational Therapy Technician:* Assists the recreational therapist in conducting medically approved recreation programs such as sports, trips, dramatics, arts and crafts.

76 - *35 Rehabilitation Therapy Assistant:* Prepared by a general orientation to engage in various rehabilitation specialties; assists the professional therapist in carrying out rehabilitation programs.

80 RESPIRATORY THERAPY SERVICES personnel treat, manage, control, and perform diagnostic evaluations, under medical direction, in the care of patients with deficiencies and abnormalities in the cardiopulmonary system.

80 - *40 Respiratory Therapist:* Administers respiratory care under the direction of a physician, evaluating the patient's progress and making recommendations for respiratory therapy. His proficiencies include ventilatory therapy, cardiorespiratory rehabilitation, microenvironmental control, and diagnostic testing of the respiratory system. (Inhalation Therapist)

80 - *45 Respiratory Therapy Technician:* Routinely treats patients requiring noncritical respiratory care; recognizes and responds to a limited number of specified patient respiratory emergencies.

85 SOCIAL SERVICES AND COUNSELING personnel use individual or group counseling techniques or provide services offered by social agencies to assist individuals in personal and/or social adjustment.

85 - *05 Alcohol/Drug Abuse Specialist:* Advises and assists people in their efforts to overcome personal, family and social problems that are manifested in alcoholism and/or drug addiction.

85 - *10 Clinical Pastoral Counselor:* Combines a knowledge of health and religion in counseling the confined ill and disabled.

85 - *15 Community Health Worker:* Assists people in the community with medical, social, or mental health problems, in finding and utilizing sources of available help.

85 - *20 Genetic Assistant:* Obtains complete genetic case histories from families of patients with inherited diseases and birth defects to be used in genetic counseling.

85 - *25 Genetic Counselor:* Counsels clients as to the origin, transmission, and development of hereditary characteristics and their relations to birth abnormalities.

85 - *30 Homemaker/Home Health Aide:* Assists with meals, shopping, household chores, bathing, and the other daily living needs, both physical and emotional, of elderly, ill, or disabled persons, working under the professional supervision required by the situation.

85 - *35 Medical Social Worker:* Prepared to identify and understand the social and emotional factors underlying patients' illnesses and to communicate these factors to the health team; assists patients and their families in understanding and accepting the treatment necessary to maximize medical benefits and to aid in their adjustment to permanent and temporary effects of illness and to utilize resources, such as family and community agencies.

85 - *36 Medical/Psychiatric Social Worker:* Provides the link between organized social services and those who need the services in order to solve social or medical problems. Through casework, groupwork, and com-

munity organization, assumes responsibility for aiding families and individuals with problems resulting from severe physical, mental, or emotional disabilities.

85 - *40 Psychiatric Social Worker:* Serves as a liaison between the psychiatrist, patient, and patient's family, to provide counseling and emotional support to the patient, and to contribute to the evaluation and diagnosis of mental disorders as a member of the psychiatric team.

85 - *42 Rehabilitation Counselor:* Helps disabled individuals become aware of and secure rehabilitation services designed to fit the disabled person for gainful employment, assists in job placement and checks on job satisfaction after employment.

85 - *43 Rehabilitation Counselor Aide:* Aids the rehabilitation counselor in developing and implementing a rehabilitation plan for an individual. Under supervision, he may conduct client interviews, locate and file data about employment opportunities, match clients with jobs available, and locate additional individuals in need of counseling or rehabilitation services.

85 - *45 School Health Aide:* Assists the physician or nurse with physical examinations and programs to improve or maintain students' health.

85 - *46 Child Care Worker:* Under supervision, implements activity and training programs that provide a preventive and therapeutic environment for mentally ill and emotionally disturbed children and adolescents. Trains children in self-help skills through intensive group sessions involving structured daily activities and reinforcement of other therapeutic experiences; records, evaluates, and reports progress of patients.

88 **SPEECH AND HEARING SERVICES personnel evaluate, record, habilitate, and research speech and hearing disorders in children and adults.**

88 - *05 Audiologist:* Evaluates hearing function and performs research related to hearing; plans, directs, and conducts habilitative programs designed to improve the communication efficiency of individuals with impaired hearing.

88 - *06 Audiologist (Pre-Master's):* Qualified for entry into graduate-level training as an Audiologist.

88 - *10 Speech/Hearing Therapy Aide:* Assists in testing, evaluating, and treating the problems of people with speech and hearing difficulties.

88 - *15 Speech Pathologist:* Evaluates, habilitates, and performs research related to speech and language problems; plans, directs, and conducts remedial programs designed to restore or improve communication efficiency of individuals with language and speech impairments, whether arising from physiological or neurological disturbances, defective articulation, or foreign dialect in children or adults.

88 - *16 Speech Pathologist (Pre-Master's):* In certain areas, treats speech and language disorders in children and adults; is prepared for graduate work in Speech Pathology.

88 - *20 Speech Pathologist/Audiologist:* Evaluates and habilitates hearing, speech, and language disorders such as neurological disturbances, defective articulation, or foreign dialect in children or adults.

88 - *21 Speech Pathologist/Audiologist (Pre-Master's):* In certain areas, evaluates and treats speech and language disorders in children and adults; is prepared for graduate work in Speech Pathology or Audiology.

91 **VETERINARY SERVICES personnel work with the care, use, production, and husbandry of animals in a medical setting.**

91 - *20 Laboratory Animal Specialist:* Manages the husbandry, production, and use of laboratory animals including responsibility for the sanitation, caging, safety, and nutrition of animals and the business management of the animal laboratory.

91 - *25 Laboratory Animal Worker:* Cares for the health of laboratory animals used in research by feeding the animals, cleaning cages, preparing the animals for experiments, administering medications, and keeping records on laboratory procedures.

95 **HEALTH PROFESSIONALS NOT ELSEWHERE CLASSIFIED**

95 - *05 Biostatistician:* Uses statistical theory, techniques, and methods to determine useful measurements or meaningful relationships of information relating to health or disease.

95 - *10 Epidemiologist:* Concerned with determining the distribution and causal factors of health problems, encompassing areas such as acute and chronic illness, communicable diseases, behavioral disorders, alcoholism, and drug abuse.

95 - *15 Health Physicist:* Directs research, training, and monitoring programs to protect hospital patients and laboratory personnel from radiation hazards, inspects and evaluates standards and decontamination procedures and develops new methods to safeguard man and his environment against unnecessary radiation exposure.

95 - *20 Health Physics Technician:* Monitors radiation levels, gives instructions in radiation safety, labels radioactive materials, and assists the health physicist in conducting experimental studies in radiation.

95 - *25 Population and Family Planning Specialist:* Uses demography, demographic techniques, and reproductive physiology to plan, conduct, and evaluate family planning programs.

95 - *30 Public Health Practitioner, Not Elsewhere Classified:* Professional trained to work in a public health capacity not specifically defined elsewhere in this GLOSSARY.

95 - *35 Toxicologist:* Concerned with the nature and extent of the injurious response to the ingestion of chemical compounds, and the determination of safe levels of exposure or ingestion in man and other species.

95 - *36 Vocational Evaluator:* Assesses needs of those with employment handicaps as a result of physical, mental, or emotional disability. Evaluates work behavior and vocational potential by collecting and/or administering and interpreting relevant biographical data, task data, work samples, psychometrics, and situational assessments, and interprets findings to the rehabilitation counselor.

Appendix D

1973 Programs Not Included in 1976

On the following page is a list of the 21 occupational titles that were included in the 1973 results but are not among the 114 occupational titles included in the 1976 results. Of the 31 titles, 10 titles footnoted in the following table have undergone name changes between the two survey periods. The 10 titles noted have been replaced by the titles indicated for the 1976 survey. The remaining 21 titles have not been included because no programs were reported on the screener questionnaire for these occupations.

Appendix D

1973 Programs Not Included in 1976

Programs	Number of Programs
Health Facilities Assistant Administrator	1
Medical Office Assistant	1
Medical Laboratory Scientist	1
Urological Assistant	2
Dental Technician	1
[1] Dietitian/Nutritionist	30
[2] Food Service Supervisor	17
[3] Cardiopulmonary/Vascular Technician	1
[4] Cardiovascular Technician	4
Electromyographic Technician	1
Pump Technician	1
Radiopharmacy Technician	1
[5] Nurse Aide	547
[6] Orderly	156
[7] Cancer Care	1
Cardiopulmonary	2
Family Planning Assistant	2
[8] Nurse Technician	8
[9] Nursery Care	1
Nurse Specialty-Pediatric	4
[10] Radiotherapy Technician	1
Scrub Technician	2
Medical Radiation Dosimetrist	1
Orthotic/Prosthetic Assistant	2
Recreation Therapy Technician	2
Rehabilitation Therapy Assistant/Aide	4
Community Health Worker	2
Audiometric Technician	1
Speech/Hearing Therapy Aide	4
Darkroom Technician	1
Prosector	1

(1) See Dietitian and Nutritionist
(2) Same as Dietetic Assistant
(3) Same as Cardiopulmonary
(4) Same as Cardiopulmonary
(5) See Nurse Aide/Orderly
(6) See Nurse Aide/Orderly
(7) See Nurse Specialty-Oncology
(8) See Newborn/Pediatric
(9) See Newborn/Pediatric
(10) Operating Room Technician